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CLINICAL LECTURE.

URTICARIA, PSORIASIS, AND SYCOSIS.

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URTICARIA.

Gentlemen:—The first case I have to bring before you this morning represents a disease not at all uncommon. The lesions, which you see are scattered, consist of pinkish-white pea-sized, rounded and flattened elevations, with the peripheral portion of each of a more pronounced tint; here and there they are broader and tend to be linear, appearing as pinkish-white streaks. The eruption is a markedly itchy one, as shown by the existing excoriations and scratch-marks. These several characters of the eruption, coupled with the fact that the individual lesions are fugacious, disappearing in a few hours, and also that similar lesions may be brought out by running the finger briskly over the skin, point unmistakably to urticaria. In almost all cases this disease is an acute one, lasting several hours or days to one or two weeks, rarely longer. In exceptional instances, it is true, the eruption may persist for several months or years, the skin rarely being entirely free from lesions, constituting what is termed chronic urticaria. The lesions themselves are not chronic, as they are usually as evanescent as in the common type of urticaria, but new efflorescences continue to appear and reappear almost indefinitely. The causes of acute urticaria are usually to be found in some disturbance of the digestive tract. Acute indigestion will, in some individuals give rise to an attack. There are those also who cannot eat crabs, clams, lobster or such food without the supervention of acute urticaria; the same may be said of strawberries, and in fact the list could readily be added to. The ingestion of certain drugs is the exciting factor in some cases. The causes of chronic urticaria are not always evident; it is often provoked and kept up by dyspeptic conditions, by disturbances, functional or organic, of the genito-urinary organs, and by a depressed condition of the nervous system.

The diagnosis of urticaria is rarely difficult; it is likely to be confounded with but one disease, and that is erythema multiforme, especially the papular type of the latter disease. The important differences are these: The lesions of urticaria are markedly itchy and are fugacious, the individual efflorescences rarely lasting more than a few hours; they show predilection for covered parts, but with no special localization; the lesions of erythema multiforme are more persistent, usually lasting several days or a week or more, are rarely itchy to an annoying degree, and show special preference for certain regions as the backs of the hands, the forearms, and the lower parts of the legs and the face. The prognosis of urticaria as ordinarily met with is favorable, the attack subsiding, upon removal of the cause, in a few hours or several days. In so-called chronic urticaria the outlook is not, unfortunately, always so hopeful, although most of such cases, if the etiological factors are properly studied and appropriate treatment instituted, will gradually and finally yield.

The treatment of acute urticaria consists in the removal of the cause, usually stomachic or intestinal disturbance, by the administration of saline laxatives and antacids. A laxative antacid deserving of special mention is the ordinary calcined magnesia, a sufficiently large dose being given to produce free action of the bowels. Or an ordinary saline, such as Epsom or Rochelle salt, or Hunyadi water may be prescribed, and an antacid such as sodium salicylate or bicarbonate administered in five grain doses three or four times daily. Emetics are sometimes advised for removing the offending material

from the stomach, but this is only called for in those exceptional cases of urticaria in which the mucous membranes of the throat share in the eruption, the patient's breathing being seriously interfered with. In the present case intestinal sluggishness, as evidenced by constipation, a coated tongue, etc., point toward the treatment to be advised. A mildly laxative dose of magnesia, repeated daily for a few days if the eruption persists, will, in all probability, be all that is needed. One point to be brought out in connection with the present case is the possibility of the eruption being due to medication. The patient has been in the hospital for fifteen days and he has had urticaria for thirteen days, a suspicious coincidence; he is subject to phthisis, and is in the hospital and is under treatment for that disease. The several drugs commonly given to control cough in bronchial or pneumonic conditions are opium, chloral, etc. Moreover, not infrequently the balsamic oils, such as oil of copaiba, or oil of turpentine, are given for their action upon themucous membranes. These several remedies are in certain subjects capable of causing urticaria, and must be, as in this case, eliminated as the acting cause. For chronic urticaria successful treatment depends upon the discovery and proper appreciation of the etiological factor or factors in the individual case, and their correction or removal by appropriate remedies. Generally speaking, exclusive of those cases demanding tonic treatment, the remedies most frequently of service are sodium salicylate, belladonna or its alkaloid atropia, ergot in full doses, and the various mildly laxative alkaline mineral waters.

In all the more marked cases of urticaria external applications for the relief of the itching are to be prescribed. Among the most efficient may be mentioned carbolic acid lotions, one to three drachms to a pint of water, to which a drachm of glycerine and one or two ounces of alcohol may be added: a lotion of thymol, the carbolic acid of the above being replaced by fifteen to sixty grains of thymol and lotions of equal parts of vinegar and water.

PSORIASIS.

The second case, now exhibited to you, is one of marked type and extensive development. You see on this man's forehead the sharply-defined border of inflammatory eruption which extends from the scalp. The border is not straight, but is evidently made up of contiguous rounded patches which have become confluent, giving rise to a wavy line. The same condition is seen behind the ears extending from the scalp, and the same also upon the neck posteriorly; in these two latter regions one or two quarter-dollar sized rounded, inflammatory, scaly, sharply-defined patches remain distinctly separated from the main eruption of the scalp. The face, as often occurs in this disease, is free. The diagnosis may readily be made from a study of the eruption upon these parts without inspecting the general surface. The diseases suggested are eczema, of the squamous type, and psoriasis. Were the eruption of a milder and less inflammatory type, seborrhœa would also have to be considered in the diagnosis. Eczema is to be excluded by the facts that it is rarely so scaly as the eruption before us, it never limits itself by such an abrupt and sharply-defined border, and it does not occur in rounded, sharply-defined patches as here seen back of the ear and on the neck. Moreover, the disease in this case has always been dry; in an eczema of long duration, whatever its prevailing type, there is usually evidence or a clear history, at one time or another, of the characteristic oozing of that disease. On the contrary, all the characters of the eruption before us as already briefly described, show the disease to be psoriasis. Now, as soon as this man's body is uncovered you see that the same characters as seen in the eruption upon the scalp and contiguous parts are presented, and as is always the case, much more clearly and emphatically. Here are a few pinhead—the beginning lesions—numerous pea-, dime-, half-dollar-, dollar-, and palm-sized, sharply-defined, inflammatory scaly patches, in some places becoming confluent and covering large areas. The disease as seen in this patient is unusually extensive, and is much more so than the average case of psoriasis met with. Upon inquiry we find that this man has had the disease for eight years, during which time it has varied considerably, once or twice the skin being almost entirely free. In the milder types of psoriasis the eruption will frequently disappear entirely during the warm months. In the milder type also, there may be some difficulty in distinguishing the eruption from the papulo-squamous syphiloderm, but usually in the syphiloderma several or more purely papular and characteristic lesions may be found, and other symptoms of syphilis may be commonly discovered. In the particular case before you, the eruption could not be confounded with any syphilitic manifestation, the patches are too large, too red, too scaly, and the disease of too long duration; the papulo-squamous syphiloderm is an affair of months, not of years, as psoriasis usually is.

As to the cause of this disease, we know little, the subjects, as a rule, being in a good or fair condition of health. It would seem that in many instances it is an expression of the lithic acid diathesis.

About the treatment, fortunately, we know much more, and in many cases the eruption may be quickly, that is, in the course of several weeks or a few months, removed. Of the few internal remedies useful in the constitutional treatment of this disease, two should be especially referred to. One is arsenic and the other alkalies. In the moderately or markedly inflammatory type represented here, arsenic may or may not do good, and if prescribed, must be used with caution, as the disease when of this type is sometimes made worse by its employment. On the other hand this is just such a case in which you expect the best results from the administration of alkalies. This man is in good health, strong, robust, of good color, and the eruption is of the actively inflammatory type, and in such patients and in this type eruption, alkalies are especially indicated. The favorite, and upon the whole the most available one, is liquor potassæ, administered in dosage from five to thirty minims, largely diluted, three times daily. We shall prescribe that remedy in this case, beginning with ten drops and rapidly increasing to twenty. As to the external treatment, the first essential, as in all cases of psoriasis, is to get rid of the scales. This will be most readily accomplished by means of repeated warm alkaline baths. The patient will be directed to take a daily bath, made up of six to eight ounces of the sodium or potassium carbonate to sufficient water to cover himself when in the recumbent position—about thirty to forty gallons. He should remain in this bath for fifteen to thirty minutes, and the warmer the bath the more effective. After a few baths of this kind the probability is that the patches will be entirely free from any scaliness. Should this not be the case, or should this method prove slow, which exceptionally happens, then the scaly areas are to be washed with sapo viridis and hot water, just before he enters the bath. During treatment, and often as an essential part of it, these baths will have to be repeated from time to time. The external remedy to be advised in this case, which is admirably suited for the class of cases this represents, is chrysarobin. It is best applied as a paint. One to two drachms to the ounce of collodion to which five minims of castor oil are added, will be found a convenient formula. Or the paint may be made of chrysarobin and a solution of gutta-percha. The one selected is painted over the patches, the paint immediately drying into a more or less elastic film. At the end of a day or two, from detachment or from cracking of the film, a repainting will be found necessary, and so on, until applications are no longer needed. Usually, at the end of a week or ten days the application must be intermitted, owing to the tendency to dermatic inflammation of the surrounding skin to which it gives rise. At such times a mild ointment may be applied. This remedy is not applicable to hairy parts, and, as it is a strong one, must be used with care and judgment. It is a good rule not to use it about the face or scalp. Tar ointment, in officinal strength or weakened, is another valuable application and one of probably more general use than chrysarobin. It is to be well rubbed into the diseased areas once or twice daily. The use of a dusting powder after tarry applications renders its use much less unpleasant. To the face and scalp either the tarry ointment will be applied or an ointment of ammoniated mercury, forty to sixty grains to the ounce.

SYCOSIS.

The third case is, as you see, one in which the eruption is only on the face, and a fact that will immediately strike you is that the eruption is confined to the beard. It has lasted several years and has never shown any disposition to extend beyond the bearded region. This fact is of great help in aiding you to reach a correct diagnosis, for it immediately brings the probable diagnosis to either non-parasitic sycosis or parasitic sycosis. Examining the eruption more carefully, you will see that it consists of a more or less diffused redness, some slight infiltration, and here and there some discrete papulo-pustules and pustules, each pierced by a hair. There is no perceptible hair loss, and no lumpiness of the parts. Parasitic sycosis—tinea trichophytina barbæ, barber's itch—is readily excluded by the absence of conspicuous hair loss, absence of lumpiness, and the non-involvement of the hairs; these being firmly seated and neither brittle nor broken. On the other hand, you find the symptoms correspond exactly with those of non-parasitic sycosis—sycosis, folliculitis barbæ. This latter is a follicular inflammation of the bearded region, characterized by varying degrees of inflammatory action, with, usually, numerous minute papules and pustules, each pierced by a hair, and with little tendency to positive hair loss. No lumpiness occurs in this disease. If still in doubt between the two diseases in a case of this kind, extract some of the hairs, and ex-

amine with a power of three to five hundred diameters; the fungus is readily found if the disease is parasitic sycosis. The etiology of sycosis is obscure. Like most pustular processes it is probably microbic, but even accepting this, we would yet be ignorant of the necessary underlying or predisposing conditions. Internal treatment is of questionable service. Tonics should be prescribed if the tate of the patient's general health indicates heir use. In some instances calx sulphurata, in one-tenth to one-fourth grain dose several times daily, seems to be of some value. The external treatment is, however, that upon which reliance is to be placed for successful results in this disease. If the parts are actively inflamed, the hair is to be clipped short and mild and soothing applications made for a few days. At the end of this time, and at the very start in the average case met with, shaving is to be advised. This is somewhat painful for the first. two or three times, but is of material aid in curing the disease. Personally I should hesitate to treat a case of sycosis unless the patient be willing that the parts be shaved every day, or second day, as circumstances demanded. Instead of shaving epilation may be practised. This is useful, but in my experience is objected to much more frequently as being more painful than is shaving. In all cases those hairs around which there is considerable suppurative inflammation, should be extracted, so as to save the involved follicle from possible destruction. Several remedies for you to remember in connection with the external treatment of this disease, one of which will be prescribed in the case before you, are precipitated sulphur, ichthyol, and Vleminckx's solution. These are exeeding valuable, and if used with judgment, will often lead to a successful result. Precipitated sulphur is prescribed in ointment form, one to two drachms to the ounce. A valuable combination is the following, although it be open to the objection of chemical incompatibility: ℞ Precipitated sulphur, ʒ jss.; balsam of Peru, ʒ ss.; diachylon ointment, ʒ vi. If a good quality of diachylon ointment is not obtainable, cold cream or equal parts of petrolatum and lard may be substituted. This, as all stimulating ointments in the treatment of this disease, is to be well rubbed in, morning and evening. Ichthyol is prescribed in ten to twenty-five per cent. ointments; or it may be prescribed with sulphur with any ordinary ointment base. Vleminckx's solution, the remaining important remedy I desire to mention, is to be applied weakened with five or six parts of water, the affected region being thoroughly dabbed with it for several minutes night and morning. The strength of this application should be gradually increased, stopping just short of irritation. In conjunction with this solution it is necessary to employ a mild ointment, either a mild ichthyol or sulphur ointment, from time to time, to counteract the dryness and scaliness produced. The strong tendency to recurrence exhibited by this disease, will be greatly lessened if shaving is practised for several months or a year or more after the existing symptoms have been removed.

COMMUNICATIONS.

THE INFLUENZA BACILLUS.*

I.—PRELIMINARY COMMUNICATION ON THE EXCITING CAUSES OF INFLUENZA.

By Dr. R. PFEIFFER,
BERLIN, GERMANY.

The following results are based on the accurate examination of 31 cases of influenza, in 6 of which a necropsy was made. A complete report will be published as soon as possible.

1. In all the cases of influenza a bacillus of a definite species was found in the characteristic purulent bronchial secretion. In uncomplicated cases of influenza these tiny bacilli were found in absolutely pure cultures, and mostly in immense quantities. They were very frequently situated in the protoplasm of the pus corpuscles. If the influenza had attacked persons whose bronchial tubes were already otherwise diseased—as, for example, phthisical patients with cavities—other micro-organisms besides the influenza bacilli were found in the expectoration in variable quantity. The bacilli may penetrate from the bronchial tubes into the peribronchitic tissue, and even reach the surface of the pleura, where, in two cases examined *post mortem*, they were found in pure cultures in the purulent exudation.

2. These bacilli were found exclusively in cases of influenza. Very numerous control examinations proved their absence in ordinary bronchial catarrh, pneumonia, and phthisis.

3. The presence of bacilli kept equal pace with the course of the disease; with the cessation of the purulent bronchial secretion the bacilli began to disappear.

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4. I had already seen and photographed similar bacilli in the same enormous quantities two years ago, during the first epidemic of influenza, in preparations of the sputum of patients suffering from the disease.

5. The influenza bacilli appear as very tiny rodlets, of about the thickness of the bacilli of mouse septicæmia, but only half the length of these. One often sees three or four bacilli strung together in the form of a chain. They stain with some difficulty with the basic aniline dyes. Better preparations are obtained with dilute Ziel's solution and with hot Loeffler's methylene blue. In this way it can be seen almost, as a rule, that the two ends of the bacilli take the stain more intensely, so that forms are produced which can only with great difficulty be distinguished from diplococci or streptococci. In fact I am inclined to believe that some of the earlier observers also saw the bacilli described by me, but that, misled by their peculiar behavior with regard to staining agents, they described them as diplococci or streptococci. They cannot be stained by Gram's method. In hanging drops they are immobile.

6. These bacilli can be obtained in pure cultures. On 1½ per cent. sugar agar the colonies appear as extremely small droplets, clear as water, often only recognizable with a lens. Their continued culture on this nutrient medium is attended with difficulties, and up to the present I have not succeeded in carrying it beyond the second generation.

7. Numerous inoculation experiments were made on apes, rabbits, guinea-pigs, rats, pigeons and mice. Only in apes and rabbits could positive results be obtained. The other species of animals showed themselves refractory to influenza.

8. In view of these results I consider myself justified in pronouncing the bacilli just described to be the exciting causes of influenza.

9. It is very probable that infection is produced by sputum charged with the germs of the disease; and the disinfection of the sputa of patients suffering from influenza is therefore urgently required as a prophylactic measure.

Addendum—Dr. Kitasato has succeeded in cultivating the influenza bacilli to the fifth generation on glycerine agar.

SNEEZING favors the expulsion of the child in a case of labor, hence the use of tobacco snuff or pepper, or other substances that will bring on the paroxysm by irritating the schneiderian membrane, will hasten a tardy delivery.

II—ON THE INFLUENZA BACILLUS AND THE MODE OF CULTIVATING IT.

BY DR. S KITASATO.

It is, perhaps, remarkable that in the case of a disease which, in the last few years, has attacked hundreds of thousands of persons, the specific exciting causes have, in spite of extremely numerous investigations, only lately been discovered. The cause, in my opinion, lies in the extreme difficulty of cultivating the tiny bacillus here before you; and, without pure cultures, the bacteriologist cannot, of course, come before the public with a new specific micro-organism.

The difficulty of obtaining cultures of specific bacteria present in the sputum depends chiefly on the great contamination of them with micro-organisms from the mouth, etc. The latter, in consequence of their more luxuriant and abundant growth, can, on our artificial nutrient media, completely overgrow and hide the particular parasites sought for. This occurs all the more easily the longer the specific parasitic micro-organism in question takes to form colonies, as, in fact, happened in the case of the tubercle bacillus.

With the view of avoiding the obstacles standing in the way of a successful cultivation, Privy Councillor Koch has devised a method, which has not yet been published, which enabled him many years ago, and myself again quite recently, to obtain pure cultures of tubercle bacilli directly from the sputum, and which has also been followed by me in the pure cultures of tubercle bacilli here before you. The method to which I have just referred will be published in full detail in an early number of the *Deutsche medicinische Wochenschrift*.

With regard to the characteristics of the pure cultures of influenza bacilli here before you, I may emphasize the following points: On a sloping surface of set glycerine agar the individual colonies present themselves as extremely small points like droplets of water, recognizable during the first twenty-four hours only with the aid of a lens, so that microscopically a test tube containing them can scarcely be distinguished from a sterile one. The individual colonies are, as has been said, so unusually small that they may easily be overlooked, and it may thus have happened that previous investigators have overlooked them.

If a culture obtained from such a colony is placed on a new nutrient agar medium, numerous small colonies arise on the moist agar surface, as may be seen in this tube. A

particularly remarkable point about them is that the colonies always remain separate from each other, and do not, as all other species of bacteria known to me do, join together and form a continuous row. This feature is so characteristic that the influenza bacilli can be thereby, with certainty, distinguished from other bacteria.

The possibility of continued cultivation is now demonstrated, and the tubes here before you already form the tenth generation in pure cultures. On gelatine they do not grow, as they do not generally multiply at a lower temperature than 28° C., which is the temperature at which gelatine solidifies. In *bouillon* they grow scantily. In the first twenty-four hours single white particles are seen swiming in the *bouillon*, the intervening fluid being perfectly clear. Later, they sink to the bottom and there form a white, woolly mass, filling the end of the test tube, whilst the supernatant *bouillon* remains entirely clear—a proof that we have to deal with an immobile bacillus. In conclusion, I may remark that I have accurately studied with the microscope, and by culture, for a long time back the sputa of tuberculosis in respect to all the micro-organisms occurring therein besides the tubercle bacillus, and also the sputa of pneumonia, bronchitis, etc.; but the present bacillus, so extraordinarily characteristic in its cultures, and so easy to be recognized, has not come within my experience except in influenza patients.

III.—ON A MICRO-ORGANISM IN THE BLOOD OF INFLUENZA PATIENTS

By Dr. P. CANON,
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During the last few weeks I have, under the direction of Dr. Guttmann, examined the blood of twenty influenza patients in stained preparations, and in almost all cases I have found in the blood one and the same micro-organism. The examination of the blood was made in the following way: A drop of blood obtained by pricking the finger was received on a perfectly clean cover-glass; this cover-glass was placed upon another one, and the two then drawn apart. The preparations, after they had been thoroughly dried, were placed in absolute alcohol, in which they were left for at least five minutes. They were then taken out and placed in the following staining solution (Czenzynke's solution): ℞ Concentrated watery solution of methylene blue, 40 grammes; ½ per cent. eosin solution (dissolved in 70 per cent. alcohol), 20 grammes; distilled water, 40 grammes. The cover-glasses immersed in this staining solution were placed in an incubator at a temperature of 37° C., and left there from three to six hours, when they were washed with water, dried, and embedded in Canada balsam. In the preparations of blood made in this manner where the red blood corpuscle were red, and the white ones blue, I found the above-mentioned micro-organism. It is found stained blue, sometimes in large quantities, but mostly sparingly, and only to be identified after a long search (about 4 to 20 in the preparation). Sometimes it appears as a small diplococcus, sometimes, especially when it is more deeply stained, as a short bacillus. In six cases I have found it also in numerous larger and smaller heaps of from 5 to 50 individual microbes with a very characteristic appearance. In these six cases the blood was drawn during a fall of temperature or shortly afterwards; in three of these no further rise of temperature occurred. From three to six days later I failed again to find the micro-organism in the blood in these three last cases. Sometimes I have been able to make the diagnosis of influenza when clinically it was not certain, by means of preparations of the blood alone. I have also found the bacteria in the blood, and, indeed, in considerable quantities in cases where there was no appreciable local lesion, and especially no cough or expectoration. Whilst making the preparations I have generally at the same time made streak inoculations of the blood on agar, glycerine agar, sugar agar, and *bouillon*. In six cases the *bouillon* was injected into mice, partly at once, partly on the following day after it had been in the incubator. These inoculations and experiments on animals always yielded a negative result. As on the basis of my researches, I am of opinion that this micro-organism occurs in the blood of all persons suffering from influenza (at least, in that of those who have fever), and as it is not found in the blood of other persons, and as it is a micro-organism hitherto unknown, I believe that it stands in direct relation to influenza.

Privy Councilor Koch had the goodness to examine some of my preparation—for which I tender him my best thanks—and pointed out that the micro-organism visible in them was identical with the bacterium found by Staff-Surgeon Dr. Pfeiffer, which has been described in the preceding paper, which is published at the same time as mine. I began these researches about the middle of December; I have, however, still a large

number of preparations to stain and to examine. I propose to publish the results of the further research in a later communication. I have to thank Dr. Guttmann and Professor Dr. Sonnenburg, Director of the Surgical Section of the hospital, for kindly placing patients at my disposal.

IV.—SOME REMARKS ON THE INFLUENZA BACILLUS*

By E. KLEIN, M.D., F.R.S.,

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The account published in the *British Medical Journal* of January 16th, 1892, of the observations of Pfeiffer and Kitasato on the constant and copious occurrence, in the bronchial secretion in cases of influenza, of a species of minute bacilli, well characterized morphologically and culturally, as also the observations of Canon on their occurrence in the blood of influenza cases induce me to give an account of some observations which I have made during the end of December, 1889, and the beginning of January, 1891, that is, during the early presence of the epidemic in London. By the kindness of Dr. Stephen Mackenzie I was enabled to see and examine cases of influenza in the acute stages at Dr. Barnado's home, which I think were amongst the first cases which occurred in London.

Examination of the Blood.—The blood was examined in cover-glass specimens dried in a thin film, stained and mounted, and in cultivation on gelatine and on ordinary nutrient agar. The cases were those of boys between 10 and 15 years of age; all were in the febrile stage, ranging from a few hours to twenty-four hours since the first symptoms appeared. In one out of these six cases there were present in the cover-glass specimens—stained in rubin first, then in methyl blue anilin water—comparatively few minute bacilli; they occurred singly, a few as dumbbells, and only rarely as small groups. As regards thickness, length, and polar staining, they compare completely with those described by Pfeiffer and Canon, but some of the bacilli were quite as long as those of the mouse septicæmia with which Pfeiffer compares them. In the remaining five cases no bacilli of any kind could be discovered in the specimens. All the tubes inoculated with the blood of these six cases remained sterile.

Examination of Bronchial Sputum.—This was examined in three early cases, which had passed a few days previously through the acute febrile stage and were without fever when examined; they had bronchitis with fairly copious greyish purulent sputum.

CASE I.—E. F., a lad about 16 years of age, had a febrile attack for two day, and was kept in the infirmary for several days afterwards. Sputum, after well rinsing out the mouth, was brought up and used for cover glass specimens and afterwards for cultivations. The cover-glass specimens revealed a condition such as is described by Pfeiffer of some of his uncomplicated cases, namely, minute thin bacilli in larger and smaller clumps, and in some places almost like a pure cultivation. The bacilli are about the thickness of the bacilli of mouse septicæmia, half their length, and in well stained specimens most of them show the characteristic polar staining pointed out by Pfeiffer; but I find amongst the group of bacilli a good many that are quite as long as the bacilli of mouse septicæmia. From this sputum cultivations were made in the following manner: A particle of the sputum was placed in a few cubic centimetres of sterile salt solution contained in a sterile test tube, well shaken, and from this dilution gelatine tubes, broth tubes and agar tubes were inoculated. The broth and agar tubes were incubated at 37° C. Some of the broth tubes became turbid after twenty-four hours, others remained perfectly limpid and already after twenty-four to forty-eight hours showed at the bottom of the fluid glassy fluffy masses which increased in amount on the following days, the supernatant broth remaining quite clear. When shaken the fluffy masses broke up easily into filamentous translucent flakes. In the agar tubes there also appeared growth; in some tubes a few translucent colonies looking like flat droplets of water, other colonies opaque and white. In the gelatine tubes there appeared only liquefying white colonies.

Subcultures were then made of the broth tubes which contained only the fluffy glassy growth at the buttom of the fluid. The subcultures were made on gelatine, on agar, and in broth. The gelatine tubes kept at 20° C. remained sterile; the agar tubes incubated at 37° C. developed colonies of exactly the same kind, which in all respects compare with those described by Kitasato: circular small translucent droplet, with no tendency to become confluent. In the broth tubes incubated at 37° C., the growth was characteristic, namely, while the broth remained perfectly limpid there developed at the bottom of the fluid the characteristic glassy fluffy masses; these were noticed already after twenty-four hours, but became more conspicuous after forty-eight to seventy-two hours.

One fact which on further subcultures became very conspicuous was the rapid death of the cultures, both on agar and in broth, but more so in the former than in the latter. The agar cultures already after a week failed to yield new subcultures; the broth tubes after from ten days to a fortnight lost their vitality.

Cover-glass specimens made of the fluffy masses from the broth cultures and of similar fluffy masses in the condensation water of the agar cultures showed the growth to be entirely made up of strings and filaments; each filament is composed of short thin rods, some stained uniformly, the great majority, however, showing a granule at each end;

*From last issue of *Brit. Med. Jour.*

for this reason the filaments look exactly like streptococcus chains composed of dumbbell cocci, but the presence amongst them of uniform bacillary elements without polar staining proves the organism a leptothrix of minute bacilli. The specimens are very remarkably uniform and striking, being entirely made up of these filaments, interlacing and in bundles. Cover-glass specimens made of the colonies grown on agar show also filaments, but a good many groups of the minute bacilli; the groups more completely resembles in appearance the groups that were seen in the sputum. The organisms of all the cultures stained well in rubin (3 per cent. watery solution), in methyl blue anilin water, or in gentian violet anilin water. I have large number of these specimens, and on examining a them with only a moderately high power, the filaments could not be distinguished from streptococci made up of diplococci, but under an oil immersion their bacillary character is easily asertained, each diplococcus being really a short bacillus with a stained granule at each end. In all specimens, those of broth culture, of agar condensation water, and of colonies on agar, there are present in the filaments numerous elements which, owing to their great thickness and irregular shape, compare with involution forms; in broth cultures they are numerously present already after forty-eight hours.

From this it is seen that what is here stated of the bacillus, in the sputum in broth and agar cultures, completely coincides with and confirms what is described by Pfeiffer and Kitasato. One appearance which is not mentioned by Kitasato or Pfeiffer in their preliminary account, and which seems to be a very striking appearance, is that the growth in broth is entirely made up of filaments.

Case II.—The second case in which the sputum was examined was J. M., a lad about 14; had bronchitis after the febrile stage had passed. When I saw him he had no fever, and was about the seventh or eighth day after the first onset of the disease. The cover-glass specimens of this sputum revealed also changes of the same minute bacilli; there was no dificulty in finding the bacilli in the substance of the pus corpuscles, but there never were more than a few bacilli in each one corpuscle. Most of the bacilli showed the polar-stained granules. Also from this sputum, after dilution, successful broth cultures were obtained the same glassy fluffy masses at the bottom of the broth, which was otherwise limpid.

Case III.—The third case was that of a young man, A. A., aged about 20. Had bronchitis for several days after the febrile attack, but was getting better. Not much sputum could be got from him; cover-glass specimens showed some of the minute bacilli, either single or in small groups, but neither were they present in large masses, nor could they be found in the pus cells. Cultivations in broth and on agar failed to produce the characteristic growth.

The broth cultures obtained from cases E. F. and J. M. were used for inoculation of a number of mice and guinea-pigs, but no result, local or general, was produced.

In every case of gonorrhœa warn your patient of the danger of conveying the disease to the eyes by the fingers, and of the fearful results of gonorrhœal ophthalmia.

V.—CONCERNING INFLUENZA.*

ITS HISTORY.

The whole of the English-speaking people, nay, the world, has within the last few days been most feelingly persuaded of the present power of influenza. A prince of great though quiet promise has fallen in our midst, and a great churchman has been taken from his long but not yet finished work. These events have excited a profound interest, and, with the private and personal losses which are felt on every hand, have sufficed to concentrate an unprecedented attention on the subject of epidemic influenza. Panic on such occasions as this among the general public and their teachers, frequently alternates with apathy. But if the panic, which has undoubtedly arisen, can be turned to a useful and healthy purpose, the great sufferings the nation has undergone will not be in vain. Of the history of influenza, enough and more than enough is known; it is one of the recorded diseases of antiquity, and we have sufficient evidence to show that in all probability the epidemic under which we now lie is the same as those of the past ages. We can only here instance that some Hebrew antiquarian authorities hold that in the Talmud are to be found records of a very similar, if not identical, pestilence; that the researches of Dr. Clemow have thrown much curious light on similar visitations affecting Europe in the Middle Ages, and that the classic work of the late Dr. Theophilus Thompson connects our present with these past records in an unbroken chain of evidence.

In the bright light of modern research it may perhaps appear merely historical to note that among the first clear upholders of the germ theory of disease were our countrymen Dr. Richard Dunning and Sir Henry Holland, the latter of whom, in a remarkable and almost prophetic paper, dimly foresaw that organic cloud which now occupies the whole attention of some of the most enterprising of our profession. Sir Thomas Watson, in his *Principles*, adopted and disseminated this view of Holland's and took as a working hypothesis, a sheer hypothesis, in his own words, that "like yeast in beer we may conceive that diseases produced by animalcules (microbes) may thus infect the fluids of the body and become contagious in the fullest sense of that term."

THE THEORY OF CONTAGION.

The theory that influenza is mainly if not entirely spread by contagion is no new one,

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*Editorial in last issue of Brit. Med. Journ.

bu this idea has needed to be born again. The careful evidence collected by Gray and Haygarth in the past, and the Local Government Board Report of Dr. Parsons in the immediate present, show, to quote Dr. Buchanan's pregnant words in his preface to this report, that "Influenza is an eminently infectious complaint, communicable in the ordinary personal relations of individuals one with another." Influenza having been thus authoritatively asserted to be infectious, how can this conclusion be practically applied in the direction of prevention? Various prophylactics have been recommended; these may or may not be of use, but the only reliable course to stay the spread of the disease is that, where practicable, persons affected with influenza should be isolated, and that healthy persons should, as far as possible, avoid being exposed to chances of infection. Anyone who has influenza is in duty bound to do all that in him lies by avoiding places of public resort, and by refusing to mix freely among his friends to hinder his becoming a disseminating centre of sickness and of death. Much is to be hoped from a general recognition of this truth by the profession and the public, more, indeed, than from the too strenuous application of any powers already possessed by public medical authorities. This part of the question deserves, therefore, a more close study, towards which the paper by Dr. Richard Sisley, which we publish in another column, is an interesting contribution.

SANITARY ADMINISTRATION.

Sanitary science during the last half-century has won so many triumphs over infectious diseases, has learnt so well how to diminish the severity and extent of epidemics which it does not yet know how to suppress altogether, that the public are beginning to demand that it should seriously attempt to grapple with the disease which we in this country have elected to know by the name of influenza. The Society of Medical Officers of Health, at their meeting on January 19th, passed a resolution on the subject which is worthy of a little examination. The resolution set forth that in the opinion of that Society "influenza is a dangerous infectious disease." To some this resolution may seem a belated expression of opinion. The view was very clearly expressed by Dr. Buchanan in his preface to Dr. Parson's Report. The resolution, however, is not, it may be presumed, intended to be a mere pious opinion, but to be a basis for future preventive measures. What is to be the nature of the action to be taken?

The question is not easy to answer. Are we to understand that the epidemics of influenza are to be met in the future by the application of the ordinary methods of sanitary adminstration? The two great principles of modern hygiene have been the removal of unfavorable conditions in the environment—bad drainage, insufficient ventilation, over-crowding, and so forth—which tend to make communities susceptible to the inroads of disease, and the isolation of persons actually suffering from infectious maladies. As to the first of these procedures we may claim to have seen some result from what has already been accomplished in this country, since the effect of the recent and present epidemics of influenza on the death-rate has been less in this country, on the whole, than in any other. As to the other methods of sanitary administration, it is doubtful how far they are applicable to influenza.

Dr. Buchanan, in the preface from which we have already quoted, after observing that the disease had been shown to belong to a "class of diseases over which we exercise a measure of control," goes on to admit that "from what we have thus far seen of the specialities of influenza, we cannot feel particularly confident of our ability, under the existing conditions of society, to successfully defend ourselves against a further outbreak." Notification has been suggested as though it were a kind of panacea; but what use could be made of the information thus obtained? As is well shown by Dr. Sisley, long before it could be acted upon the mischief would have been done. The disease is certainly infectious in a very early stage, and the symptoms are so largely subjective that it may well be doubted whether notification would result in bringing to light the earliest cases. If this be so, it is certain that it would be useless at a later stage of an epidemic in any given locality. When two-thirds of the households, and perhaps not far short of a fourth of the adult population, are suffering from the disease, is isolation of the sick anything more than a dream? It is quite a different thing with such diseases as scarlet fever or even measles. The objective symptoms are obvious, and one attack is an almost perfect protection from another. It is not unreasonable to punish a man who exposes himself, or a person under his charge, in a public conveyance while suffering from scarlet fever; would public opinion sanction similar punishment of a man who felt a little ill, or had the symptoms of a more than usually severe cold, and went home in a public conveyance?

The truth is that before we can attempt to stay the pandemics of influenza we must know a great deal more about it. As Dr. Buchanan has said, "For better means of repressing influenza our expectation must be in an understanding of the natural history of the disease." We do not know whence it comes, we do not know for certain how it spreads—whether mainly by air, water, or even by fomites; we do not know whether the complications which render the disease so much more formidable than it would otherwise be are due to the primary infective agent, or whether they are produced by a secondary infection, as was generally supposed during the epidemic of 1889-90; we do not know whether the disease which frequently attacks horses and other domestic animals at about the some time as mankind is the same disease or not; and, lastly, we do not even know the measure of protection which one attack affords against a second.

It is reasonable to hope that the researches now being carried on in Berlin may result in placing valuable practical methods of dealing with the disease in our hands. We were enabled to publish last week translations of the important papers by Pfeiffer, Kitasato, and Canon, which appeared in the *Deutsche medicinische Wochenschrift* of the same week. They deserve careful study. The proof that the bacillus described is the *vera causa* of influenza is not absolute, but there is very strong presumption that it is. Much may be learnt from the study of the life-history of this microbe, but even then much will remain to be learnt as to the "natural history" of the disease. The Government of this country may very fairly be asked to contribute its share to the inter-national study of the pandemic. Dr. Parson's Report is a valuable document, and any future inquiry would have the advantage of starting where he left off; but a great many questions remain to be answered, some of which we have indicated above.

SYMPTOMS AND TREATMENT.

A rational systematic mode of treatment is of course impossible, so long as the etiology remains obscure, and hence we have at present to rely upon the main symptoms for indications. The sudden onset of febrility, the spinal tenderness so commonly met with, the pains in the limbs, the photophobia, the pronounced lassitude and anorexia, and lastly the tendency of the temperature to sink below the normal when convalescence sets in—all these facts point to the severe impression made by the infective virus upon the cerebro-spinal nerve-centres. Accordingly, it is of great importance that the patient should early have rest and warmth in bed, that the diet should be of a supporting character, and that he should remain in bed till all danger of complications has passed away. These simple points appear mere truisms, but they constitute the best preventive against the insidious development of catarrhal pneumonia, the great danger to be guarded against. It is not advisable to attempt to cut short the malady by active diaphoretic measures; abundant experience has shown the futility of such treatment. Rest, warmth, and nourishment constitute the tripod of treatment. Domestic isolation is strongly to be recommended for the sake of others.

In respect to drug quinine has been found useful by some, who have even gone so far as to declare it a prophylactic. Small doses of opium constitute a powerful support to the central nervous system, but this drug should be used with caution if any bronchitis is present, and abandoned altogether if signs of capillary bronchitis supervene. A combination of salicylic acid and antipyrin has been lately put forward under the name of salipyrin, and it is claimed for this mixture that it does not depress the system as does either of the constituents taken alone. It certainly deserves a trial, but its effects should be carefully watched. Salicylate of quinine is probably a still better preparation, but the salicylic acid employed should be naturally, not synthetically, obtained. The natural product is far less depressing than its artificial substitute. Good success is claimed for an antiseptic (carbolic acid) treatment but it remains for a larger experience to determine with what correctness.

It will generally be found that alcoholic stimulants are well tolerated in influenza, but they should not be given to such an extent as to disorder the digestion. During convalescence the patient should still keep quiet and warm for some time, and not be in a hurry to resume the ordinary avocation. The various psychoses which have been recorded after influenza plainly show that this disease is a powerful depressant of the central nervous system, and it is often several weeks before the patient again enjoys the usual vigor of mind and body. The insidious onset of pulmonary mischief afterwards is also best guarded against by keeping the patient in a uniform temperature. Iron, acids and quinine will be found useful in hastening convalescence.

Strychnine is used as an antidote for snake bite in Australia.

THE PART THE SHOULDERS PLAY IN PRODUCING LACERATION OF THE PERINEUM, WITH SUGGESTIONS FOR ITS PREVENTION.

By W. D. HAGGARD, M. D.,
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The most important point connected with the second stage of labor, and the most delicate task the accoucheur has to fulfill is to properly care for and protect the perineum during the exit of the child's head and shoulders.

The wide divergence of opinion prevailing among the ablest and best authors on obstetrics with reference to this subject, betrays such a want of agreement on many questions connected with the mechanism of head and shoulder delivery, that I feel some hesitancy in presenting my views on a subject which has been so often and so ably handled. Perineal support in some form or other was for a long time recommended by most obstetrical authorities; but such support was for the most part confined to the period occupied in the passage of the head, ignoring any claim the perineum might have to support during the more perilous passage of the shoulders.

Smellie advocated artificial dilatation of the outlet; Roederer, pressing the perineum in the direction of the sacrum; Puzo, stretching and lubricating the parts; Hamilton, of Edinburgh, agreed with Puzo in the use of lubricants, but further advised that the perineum be cautiously pushed back over the face and chin, when the head is being born. All of these procedures, as we shall see, differ widely from the more modern practice.

Dr. Ramsbotham says: "As soon as the head has come to press upon the external parts it becomes our duty to take our seat by the bedside, and never move from our position till the child has passed. This we do to prevent laceration." "Place your elbows," he continues, "against the bedstead, regarding it as a fixed point, and allow the perineum to be forced against your hand."

This dogmatic teaching, coming from one of the most distinguished obstetricians of his day, probably exercised a greater influence in favor of perineal support on the professional mind than did all his predecessors.

Many years ago, in a case of forceps delivery, he looked with great care after the delivery of the head, to see if any laceration had occurred, and found only a slight tear. After the passage of the shoulders he found the tear extended down to the verge of the sphincter ani. This case made an indelible impression on his mind, and from that time until the present he has never failed to make an ocular inspection, both after the passage of the head, and again after the passage of the trunk and shoulders. He is sorry to say that he can now recall vividly a number of cases in which he has found a similar result, especially in forceps delivery, for some abnormality which would have resulted in rupture without their use. For a long time he consoled himself with the thought that the unfortunate cases occurred in women in which there was a disproportion in the size of the head and shoulders, or between the vulvar outlet and the child. A larger experience, and a closer observation of the mechanism of head and shoulder deliveries, has convinced him that a large number of lacerations that occur are avoidable, with the precautions which experience has taught him are required.

Lacerations in a certain per cent. of cases, and under certain conditions are wholly unavoidable, do what we may to prevent such a result. A knowledge of this fact has probably kept back for ages, advances and improvements, especially in the way of determining the proper application of the much-needed support. That the mode of supporting the perineum for ages was faulty in the extreme, he proposes to show. He thinks a little reflection will make it plain that the earlier writers on obstetric medicine, as well as some of the present day, placed entirely too much stress on perineal support. It is equally plain that they attached too much importance to the head as a factor in effecting lacerations.

If we recall for a moment the mechanism of the delivery of the head, and compare it with the more speedy delivery of the shoulders, and reflect upon the requirements of nature, it is obvious, that so far as dilatation is concerned, that the functional activity of the physiological requirements by which dilatation is effected is much better provided during the slow stretching effected by the head than the rapid distention induced by the passage of the shoulders.

Goodell is perhaps more pronounced in his opposition to perineal support, and gives more cogent and plausible reasons therefor than anyone who has written on the subject. He considers the word "support" a misnomer as applied to the perineum, and that the head instead of the perineum needs support. He thinks that if the support ever does any good, it is by retarding the head through the interposed perineum, and that the good thus

obtained is overbalanced by the evil. He suggests that if the hand be held continually against the perineum, it becomes unyielding and incapable of equable dilatation, and the strain is thrown on the fourchette.

His instruction for supporting the head in its exit through the vulvar outlet is admirable. He holds that when the pains are abnormally strong, the passage of the head should be retarded by supporting it with two fingers in the rectum, while with the thumb of the same hand he makes the needful restraining pressure upon the head.

If with the passage of the head the danger were ended, his dicta would be perfect, but unfortunately it is not. Leishman says, "It is not by the passage of the head that the most serious lacerations are effected; they are often commenced by this, but it is the passage of the shoulder which extends the rupture."

It is singular that Goodell in his able and comprehensive description of the management of head deliveries should have overlooked the fact that the shoulders should be an object of even more solicitude on account of the greater peril to the perineal structures.

Lusk says, "In the majority of cases, the shoulders are expelled spontaneously, still it is a good plan to expedite the descent by pressure made with the left hand at the fundus of the uterus." The above sentence is so much at variance with the sound teaching of its author, as well as most other modern authorities, that I am at a loss to see how he could recommend pressure over the fundus to expedite labor, when it is so desirable that the shoulders should be allowed all the time possible to effect dilatation in the perineum now firmly contracted around the child's neck, "Unless there are symptoms of threatened asphyxia in the child," said Leishman, "or circumstances which demand immediate delivery, we would not in any way interfere in the birth of the trunk, which will be naturally effected after a short pause, generally counted by seconds."

Thus we find Leishman squarely in opposition to Lusk in his advice to expedite the descent of the trunk by pressure made with the left hand at the fundus of the uterus. It is true he says in the next sentence, "care must be taken lest the lower shoulder convert a slight tear in the perineum into an extensive laceration"—a contingency all the more likely to occur if the delivery be expedited by pressure as he directs. Then follows this most judicous counsel: "The right hand should therefore be applied to the perineum in such away as to lift the shoulders upward and at the same time furnish a bridge over which it can glide in its movement forward." Whereas Playfair, Leishman, and Lusk all recognize the serious danger encountered in the delivery of the shoulders, but none of them except Lusk make provision for tiding the perineum over the last and most serious danger of laceration during the passage of the shoulders.

During the passage of the cephalic ovoid the pressure is equally distributed over the entire surface of the vulvar outlet, so that every fiber and tissue entering into the complex anatomical structure of the perineal body is placed under contribution. And thus the highest functional activity of the organ is attained.

As soon as the head rotates on its longitudinal axis and the occupant emerges under the symphysis pubis, the chin sweeps over the floor of the pelvis with the head in extreme extension. As soon as it is delivered, flexion on its transverse axis takes place, the chin falls forward, concealing the perineum and anus, if the woman be in a dorsal position from view, and this may account for the supposition that the laceration discovered after the birth of the child occurred during the passage of the head. The perineum now rapidly and forcibly contracts around the child's neck. During the short interval of repose that follows the delivery of the head the uterus gathers itself for a final effort, which speedily culminates in a strong propulsive pain, often of sufficient strength, supplemented by the auxiliary forces, to hurl the child forcibly into the world. At this time rotation of the shoulders and restitution of the head takes place almost simultaneously. In the haste to complete delivery, every means is resorted to by some, such as compression of the fundus, and even pulling upon the neck, and hence I urge that it becomes us to keep well in mind the mechanism of labor, and restrain the delivery of the shoulders until they have adapted themselves to the long diameter of the outlet. The posterior shoulder, unsupported as it must be with the woman occupying the dorsal position, literally plows its way through the perineal body, laying it wide asunder in its passage. That perineal lacerations occur more frequently if the woman be delivered in the dorsal position than upon the side, has been abundantly proven by the statistics of Schroder and others.

Lusk says, "During the third stage the patient's posture should be left in general to her own volition. The physician should accustom himself to conduct labor with equal

facility, no matter whether the woman lies upon her side or upon her back. The left lateral position, affected by English accoucheurs, is very convenient at the time of delivery, especially when there is occasion to support the perineum, and where, owing to the flatness of the nates, the vulva is scarcely raised, in the dorsal posture, above the level of the bedding."

Ramsbotham says, "The most convenient as well as easy posture which the patient can take, and which seems the best adapted for facilitating the descent of the head through the pelvic outlet, is the one usually chosen in this country, the left side, with the shoulder inclined forwards so that the spine may be somewhat curved, the thighs flexed upon the pelvis, and the legs bent upon the thighs. In this position, as has been before shown, the axis of the pelvic entrance is brought as nearly as can be accomplished into a line with the axis of the trunk; the muscles passing over the pelvic brim, particularly the psoas, are more perfectly relaxed than any other." Hence it follows that the obstetrician who has due regard for the integrity of the perineum, should insist upon the patient occupying this position. Rapid delivery is such a frequent source of laceration, that it should never be encouraged except in the face of an emergency requiring speedy delivery, either in the interest of the mother, or child, or both. In forceps cases all possible safe-guards should be thrown around the vulvar outlet to protect it from injury by desisting from tractile efforts during the acme of pain, and as soon as the head begins to emerge from under the symphysis the forceps should be removed and the labor left to the natural resources. The head should now be supported as hereinafter directed, and the delivery of the shoulders should be effected under such restraining influences as will insure the protection of the perineum, if possible.

He has shown that the shoulders are responsible for the major part of perineal tears, frequently by extending a slight rupture into a deep laceration, often through the sphincter ani, extending up the gut to a greater or less degree. Why is this so? A little reflection will make it apparent that there is a good and sufficient reason found in the fact that the oval shape of the head gradually effects an equable, well directed pressure upon each and every tissue forming the pelvic outlet, while each recurring pain brings into requisition some new force, until the entire structure is laid under contribution in bringing into play the highest and fullest physiological function of the perineal body. When dilatation to its fullest extent is obtained, it generally admits the passage of the head without rupturing the perineum.

Whereas, in the delivery of the trunk and shoulders the perineum is placed at the greatest possible mechanical disadvantage by the increased power which the uterus gains by its diminution in size, effected by contractility after the birth of the head; besides the perineum, immediately after the passage of the head, rapidly and forcibly contracts around the child's neck. As soon as the head is born a short pause ensues. The uterus, now reinforced by additional contractile power, gathers itself for renewed effort, which is now sufficiently powerful to overcome all resistance. Therefore, if the perineum cannot or will not stretch to make room for the body to pass, it must tear, and tear it will, unless the rapid advance of the shoulders be retarded by judicious support until the perineum relaxes, as he believes it will generally do, especially if aided by the relaxing influences of chloroform, which is both speedy and effectual in its effects.

This lesson teaches us the necessity of placing the woman on her left side, so as to give the accoucheur a better opportunity to retard the passage of the shoulders by affording the needful support to the presenting part. It is clear that the dorsal position affords no facility whatever for restraining the passage of the body when uterine contractions are sufficiently strong to overcome the resisting powers of the perineal body.

With this array of facts before us, he does not think the choice of positions—at least during the second stage of labor—is any longer a debatable question.

Then why may we not all meet on one common plane and agree upon the left side position as the ideal one to be observed in obstetric practice? If we, as practitioners of the obstetric art could agree upon this, and forever eschew the fallacious idea that the perineum needed support, and leave it to take care of itself, as nature intended it should do, we might then devote our time and skill to the support and restraining influence of judicious and timely pressure applied to the presenting part of the child until sufficient dilatation of the vulvar outlet was obtained to allow the passage of the shoulders and trunk with as little disturbance of the perineal structure as did the passage of the head.

Slowly, but surely, year by year, will these great truths, so plainly foreshadowed by Goodell, Lusk, Leishman and Playfair, be

impressed upon the minds of the medical profession. It is true that every foot of scientific advance in obstetric medicine has been contested by fallacious arguments and traditions that have for centuries been handed down from one to another. It is true that error cannot be eradicated in a day. The process must be one of gradual evolution, followed by verification.

The suggestions which I wish to make from a study of this paper are:

1. The patient should occupy the left lateral decubitis, at least during the second stage of labor.

2. Overcome rigidity of the vulvar outlet by the judicious use of chloroform.

3. The presenting part of the child should be supported, and not the perineum, during the passage of the head and shoulders.

4. Support the head by pressing it well up under the symphysis pubis, by placing the right thumb in the rectum and fingers of right hand expanded over the occiput.

5. To retard the exit of the shoulders, pressure should be applied to the trunk and shoulders by placing index and middle fingers of the left hand in the rectum, with the thumb in the vagina, to restrain its exit.

6. With the right hand restraining and supporting the head and neck by pressing well over the symphysis pubis the head and neck.

REGULATION OF HYPNOTISM IN BELGIUM.

The first land which has undertaken the legal regulation of the practice of hypnotism is Belgium. A few days ago the Legislature adopted a law which, in all probability, will serve as a model for the legislative action of other countries. It declares that any one who exhibits publicly a person hypnotized by himself or others will be punished by imprisonment ranging from two weeks to six months, and be fined from $5 to $200; that any one not in possession of a physician's diploma who hypnotizes a person under twenty years of age, or not in the full possession of his faculties, will be punished by imprisonment and fine, whether the subject be exhibited or not; and that any one who allows a hypnotized person to sign a document or other paper, whatever its nature, with the object of fraud, will be punished by imprisonment. The same penalty threatens a person who attempts to use a document signed by one while hypnotized. The people of Belgium have welcomed the adoption of the new law.

ACUTE RHEUMATISM.*

By JAMES FRAUNFELTER, M. D.,
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The name "Acute Rheumatism" was first applied to this disease in 1642, but at what date the disease first make its appearance is not known. It is not my purpose, in this paper, to enter into a discussion of all the etiological factors, or the theories of blood changes occurring in acute rheumatism; neither do I hope to offer anything especially new in the study of this disease, but, I propose to outline some of the main points of interest in reference, more particularly, to the etiology, nature and treatment of acute rheumatism, as it presents itself to me, after twenty years' experience with the disease, which, to me has been the most perplexing, on account of its uncertain course, at times baffling my efforts at every point.

Much has been written concerning its character, and volumes have been devoted to its various systems of treatment, which, from time to time, have held the favor of medical writers, yet we feel that the subject is still not exhausted. Whilst we must admit that much is unsatisfactory, and new facts are continually being discovered, there yet remains a field for the active investigator to discover more for the advancement of the welfare of suffering mankind.

With this end in view I hope to be able, in this paper, to suggest some conclusions on the cause, nature and treatment of this disease which a somewhat extensive study on this subject, together with my personal experience, have developed.

Rheumatism is a constitutional disease resulting from the accumulation of excretory products in the system, and may be defined as being a specific inflammation which attacks the structures in and around the joints, more especially the larger joints, the inflammation changing from one to another, and is rarely attended with suppuration. In addition to the joint-affection, the fibro-serous structures of the heart are attacked with the inflammatory process, and is generally attended with high fever and nervous conditions, with intense pains in and around the joints.

Rheumatism is not likely to be confounded with any other disease, except pyæmia and gonorrhœal rheumatism; the former always being associated with some wound or lesion, is attended with more marked chills and the

*Read before the Union meeting of the District Medical Societies of Northern Ohio, Nov. 7, 1891.

perspiration is not acid. The latter disease is always associated with gonorrhœa, with a marked tendency to attack the knee joint.

As to the etiology of the disease, exposure, cold and dampness, are usually considered the principal factors in the causation of acute rheumatism. Severe muscular exertion, attended by overheating the body and followed by chilling the surface, is a frequent cause. But neither will produce rheumatism unless there is a predisposition to the disease either from hereditary or acquired taint, the former of which is said to be present in about 34 per cent. of all cases. A residence in a cold, damp climate for a long time acts as an exciting cause. Age has a strong predisposing influence, as children under 15 years of age and adults over 45 are not liable to be attacked with the disease, as statistics show that patients are more susceptible to acute rheumatism, between the ages of 15 and 30, males being more frequently attacked than females, probably due to their occupation being more exposed and more frequently engaged in severe muscular exercise. Season and climate are, no doubt, predisposing causes, it being more prevalent in a moist, cold climate.

Occupations which require great muscular effort in a warm atmosphere predispose to it, such as washer-woman, bakers, moulders and laborers generally.

The above are the principal causes which have a tendency to predispose to or excite an attack of acute rheumatism. When we come to speak of the nature of rheumatism, we must regard it as being a constitutional disease, with local inflammations, the fever not being a result of the local inflammation, but the first element in the disease, the inflammatory process being of a specific character and is the result of some poisonous material circulating in the blood, which has a strong tendency to attack the structures in and around the joints and the heart; in other words, those structures subject to severe movement and strain.

Another plausible reason for attacking the joints in preference to other parts of the body is that the special poison of rheumatism, whatever this may be, finds its principal obstruction, while circulating through the tense fibrous tissue of the joints and thus by pressure on the nerves of those parts produces the pain and disturbance characteristic of the disease.

Thus far everything appears plain and satisfactory, but we follow the investigation a little farther, and ask ourselves the question, "What is the nature of this poisonous material?" Then it is we stop and wonder why it is that, in this day and age of progression, especially in the medical profession, that we must admit that we cannot answer the question entirely satisfactorily to ourselves.

I will, however, give some of the views on this subject as given by some of our best medical writers.

In looking over our latest authors on this subject, we find there are several theories advocated, the generally accepted one being the "lactic acid theory," by Prout. Then we have the "miasm" or "malarial" idea by Maclagan, and the "germ" and "nervous" theories, and the "uric acid" theory, by Haig. Some of the arguments in favor of the lactic acid theory are as follows:

1st. Acute rheumatism is always accompanied by an excess of lactic acid in the system, and the disease never occurs without such excess, and such excess is found only in connection with it. 2d. The injection of lactic acid into the system of lower animals is followed by inflammatory changes, similar to those which occur in acute rheumatism. 3d. The administration of lactic acid to man has been followed by symptoms indistinguishable from those of acute rheumatism. The lactic acid theory of Prout, is again modified; the latest being founded upon the modern physiological teaching, that is, during muscular exercise sarco-lactic acid and acid phosphate of potassium are formed and carbon dioxide set free in the muscular tissue, and that cold acting on the surface, under such circumstances, may check the elimination of those substances and cause their accumulation in the system. This is to me the most plausible theory and explains, probably, more clearly than any other, why the muscles and their associated organs, the joints and tendons, should suffer first and chiefly; because the morbid influences are exerted upon them, when exhausted by functional activity. This would also partly account for the excess of acid elimination during the course of the disease,

The "miasmatic" theory is the one advocated by Dr. Meclagan, who assumes that acute rheumatism is caused by the entrance into the system, from without, of some miasm closely allied to but quite distinct from malaria. His arguments in favor of his theory are quite plausible and extensive, the nature of which, he admits, we have no precise knowledge of. To substantiate his theory, however, he compares the different types of malaria fever with acute rheumatism, showing that both diseases are more prevalent in low, damp localities, but that the conditions under which rheumatism was most likely to arise,

were a cold damp climate rather than a warm damp climate. Impressed with this fact and believing in the miasmatic origin of the disease, he states, in the following language, taken from his own writing: "It seems to me that a remedy for this disease was most hopefully to be looked for among those plants and trees whose favorite habitat presented conditions analogous to those under which the rheumatic miasm seemed most to prevail, and upon reflection it seemed that the plants whose haunts best corresponded to this description were those belonging to the natural order Salicacea, the various forms of willow, among this order I determined to search for a medicine for rheumatism," hence our present most effectual remedy for the treatment of this affliction, of which I will speak later.

He concludes from the above that the poison enters the system from without, and its nature was that of a miasm.

The germ theory, like the miasmatic, refers to rheumatism as being the result of a poison or germ, not generated within the system, but introduced from without; this germ, whatever kind it may be, is supposed to enter the blood, through the dilated orifices of the sweat glands, which first set up an endocarditis, then the capillary emboli thus formed produce the articular inflammation: which theory, to me, is pretty far fetched.

The nerve theory is the one advocated by J. K. Mitchell, afterwards by Hutchinson, Gull, Weir Mitchell, and Charcot. According to this theory, the exciting causes, cold and dampness, produce an impression on the surface of the body, which is conducted to the vaso-motor and trophic centres by the afferent nerves, the joints and other structures becoming affected through these systems. After thoroughly investigating this theory, we find so many lame features in it that, to me, it is not very plausible.

The "uric acid" theory by Haig is to me the latest on the subject. He argues that because acute rheumatism is cured by the use of salicylate of sodium, which also, at the same time, produces an enormous excretion of uric acid, therefore, uric acid is the cause of rheumatism. Then again, there is no doubt whatever, but that salicylate of sodium relieves the pain, and brings down the temperature. It also causes, at the same time, a relatively large excretion of uric acid. Besides the salicylates, the only drugs that have obtained any great repute in the treatment of this disease are the alkalies, and these, again, promote a free excretion of uric acid. He shows pretty conclusively, to his own mind, at least, that a large amount of the uric acid excreted does not come from the kidney direct, but from a store in other parts of the body, as the joints or viscera.

The conclusion is that if this uric acid came from the joints its presence there was quite sufficient to account for all the pain and fever of an attack of acute rheumatism.

After making a pretty thorough investigation of this subject, I find the above to be the different theories advanced for our future consideration, and, after carefully studying these different ideas, and comparing them, we arrive at the following conclusion in reference to the nature of rheumatism: That the inflammation is the result of some special poison, generated within the system, circulating in the blood, and from our present knowledge, lactic acid appears to be the most prominent and plausible.

It has been my experience to be able, almost invariably, to trace every case of acute rheumatism as being due to prolonged muscular exercise and cooling off too suddenly, or working in a cold, damp place; and in accordance with our late physiological teaching, during such exercise sarco-lactic acid is generated in the muscles; the surface becoming chilled, this acid is not eliminated as it should or would be under other circumstances, causing it to accumulate, thus producing its specific effect in and around the joints, hereditary taint being an important factor in all cases.

When we come to speak of the treatment of acute rheumatism we should expect to find it about as unreliable and unsatisfactory, as the nature of the disease is uncertain. If the acid theory of the disease is correct, then we should be able to treat the disease on scientific principles, by prescribing alkalies; again, should the disease be due to a miasm, then the successful method of treatment would naturally suggest itself, in the remedies—quinine and the different preparations of salicin; but we find from actual experience, that neither are successful, in all cases, and that, after all, our treatment of acute rheumatism, is not scientific but empirical.

When speaking of the etiology of this disease I neglected to mention that, disturbed nutrition and errors in diet acted as important factors in the development of acute rheumatism, and should be borne in mind, when we come to speak of the treatment, which naturally divides itself into preventive and curative. Persons who are necessarily exposed to the exciting causes of rheumatism should be encourged to wear woolen next to the skin so as to prevent their bodies from chilling so-

much as possible, and when there is a predisposition and a susceptibility to the disease, they should be advised to remove to a warm dry climate, with sandy soil, in a location not over-crowded with trees, exposed to sunlight and with a free circulation of air. Morning baths with tepid salt water, followed with thorough friction of the whole body, acts as a strong preventive. When heated or over-tired from severe exertion, standing about in a cool atmosphere should be avoided. I feel confident that if the above preventive measures were adhered to closely, there would be very few cases of rheumatism for us to treat. The hygienic treatment of a patient suffering from rheumatism is also very important and should demand our strict attention. When possible to do so, the patient should be placed in a large well-ventilated room, the temperature being kept constantly and regularly at from 68° to 70°; flannel or wool should be worn next to the skin, but the bed clothing should not be so heavy as to increase the perspiration. The whole body should be rubbed off frequently with a dry towel, under the clothing, to remove the excessive perspiration. Placing the patient between blankets, is, I think, a mistake, as it increases, to a marked degree, the already natural tendency to excessive perspiration, thus making the patient more susceptible to relapse. When we come to speak of the diet of rheumatic patients there appears to be a difference of opinion, some claiming that an exclusive starchy and saccharine diet will predispose to bring on attacks of acute rheumatism, and that those persons who adhere strictly to the above diet are more susceptible to the disease, and it should therefore be avoided in the early stages.

It is, however, pretty well agreed by all medical writers that a low unstimulating diet should be observed until all fever and articular inflammation have subsided, the tongue clean and the heart complication, if any, declined.

In the early stages of the disease it is not difficult as a rule, to restrict the patient to a suitable diet, as the difficulty usually is to get them to take enough nourishment, but during convalescence, and when the appetite begins to return, then it is difficult to make a patient believe that a good supply of butcher's meat will retard his progress towards recovery. But as a matter of fact, those of us who have had much experience with rheumatism know that a return to solid food, and more especially the giving of meat too soon, is most likely to be followed by a relapse, because in acute rheumatism the system is loaded with waste products, the result of imperfect assimilation and the digestive functions are seriously impaired. So long, therefore, as the symptoms are acute, small quantities of milk, with some alkaline water, such as soda or lime water, should form the main part of the diet, besides these a little beef-tea, chicken tea, or mutton broth may be added. As the temperature falls and the acute symptoms subside, vegetable soups, bread and other starchy foods may be gradually added to the list; gruels, malted-foods, arrow-root, rice, the yolk of an egg beaten up with milk, and a small quantity of brandy. As convalescence progresses, fish, oysters, and chicken may be allowed once daily. The above line of diet should be adhered to strictly until all symptoms of rheumatism have entirely disappeared.

As a rule ales, wines, and the stronger alcoholic liquids are objectionable, except where the action of the heart is feeble, or in the latter stage of the disease.

In selecting medical remedies for the treatment of acute rheumatism we should use such medicines as our experience has taught us will the most rapidly reduce the pyrexia, allay the pain, and, at the same time, most surely prevent heart complications. In my experience we have the best remedies to this end in salicylate of sodium and strophanthus, the latter being given as a heart tonic. I have selected salicylate of sodium because in it we have combined the alkaline and salicin treatment which has been the most effectual in my cases, and I believe I am safe in saying that the failures with this remedy in many cases may be attributed to not giving large enough doses. In the beginning I commence with gr. xx. doses, repeating every hour until there is decided evidence of its physiological action, and its remedial effects, the indications of which are deafness, the relief of pain and the decline in the temperature of the body, then the doses should be diminished; but this should not be done too quickly as the symptoms are apt to return. Let me state farther, that the success of this treatment depends largely on the continuation of the remedy. Some time after convalescence seems to have been established, in cases where the stomach does not tolerate the remedy I add a little lemon juice, or a mild bitter tonic, and when the stomach obstinately refuses to assimilate it, I substitute salicylic acid or salicin; the latter is most likely to be assimilated and with better effect, only that its action is slower.

If heart symptoms should arise, the salicylate must be stopped at once, and the alka-

line treatment substituted. A choice as to which alkaline remedy should be used is a matter of some importance. I think bicarbonate of sodium is the least depressing, and I often combine with it the salicylate in gr. xx. doses, or I administer it as recommended by Dr. Fuller in ʒiss doses in connection with acetate of potassium in ʒss doses, rendered effervescing at the time of administering it, by adding lemon juice or ʒss of citric acid, in about ℥iii of water which makes a rather pleasant as well as cooling drink. This I repeat every 3 or 4 hours, diminishing the dose as soon as the urine becomes alkaline; continuing this treatment until convalescence is established, in doses sufficient to keep the urine in an alkaline condition. When a cathartic is needed during the progress of the disease, I use Rochelle salts.

I neglected to mention that in the commencement of my treatment in nearly all cases, I begin by giving my favorite prescription—one tablet, containing calomel gr. ¼; pulv. ipecac gr. $\frac{1}{12}$ and sodium bicarbonate gr. ii. every hour until free catharsis is produced; this followed with a light dose of Rochelle salts or a seidlitz powder. In some cases I get good results from the use of ʒi doses of effervescing bicarbonate of potassium, repeated every three hours. Salol acts well in some cases, but I have no confidence in antikammia. Acetanilid, phenacetine and antipyrine should never be administered in this disease. Opium is admissible in all cases where pain is a prominent symptom; given in sufficiently large doses to produce the desired effect. Quinine can be used to advantage in large doses, during the acute stage, especially in malarial districts, and in tonic doses, during the whole time of convalescence. In endemic cases, tincture of iron in large and repeated doses will be attended with good results. Numerous other remedies might be mentioned, but the above is about the line of treatment I have adopted in my practice, and I must say it has been highly gratifying, as I have had but one case of heart complication in all my experience.

Before closing this paper I cannot refrain from giving my experience with the local application of cold in the treatment of this disease, which has not been very extensive, but entirely satisfactory to myself, and very grateful to my patients.

Up to eighteen months ago I used various kinds of liniments, hot applications, wrapping the joints in cotton batting, etc., and, I think, not without some benefit, but since I have used cold applications to the joints I could wish for nothing better, as the almost immediate relief it affords the patient is something wonderful, but you will find that its application requires considerable courage, however, on the part of the physician to use it in the face of the criticism it brings forth from all the old women in the neighborhood, as it is entirely out of the line of the usual way of treating this disease, but I assure you that you will not be disappointed in its use if thoroughly applied, which may best be done by wringing heavy towels out of cold, or even ice, water and wrapping the joints; this may be covered with flannel and changed as often as necessary to keep the part cool. It is important that it should be continuously applied, until all the symptoms of the disease have disappeared. I do not wish to be understood that I claim any originality in the use of cold in the treatment of acute rheumatism, as Drs. Senator, Esmarch, and Stromeyer used it years ago, but I was induced to use it because I have seen its good effects in combating inflammations in other parts of the body, and could see no reason why it should not act in the same way in inflammation of the joints as a result of rheumatic poison.

I would be pleased to have the experience of other physicians on this subject.

(I)—SARCOMA OF THE KIDNEY; (II)—MULTIPLE ABSCESSES OF THE LIVER.*

By J. B. HERRICK, M. D.,
CHICAGO, ILL.

About a year ago a gentleman in apparently good health, aged 65, came under the care of Dr. Charles Warrington Earle for the sudden appearance of blood in the urine. He was put to bed by the doctor, and seemingly recovered after three or four days, the blood completely disappearing.

There was at this time no temperature, no pain, merely the appearance of blood in the urine. At the end of about a week after the apparent recovery, he was up and around, and a week later, that is two weeks from the first appearance of hæmaturia, Dr. Earle was again called to see him because of a recurrence of the previous trouble. There was a larger amount of blood than there had been at first, and the patient complained of some pain in the left lumbar region. He was again

* Read before Chicago Pathological Society, Oct. 1891.

put to bed, placed upon ergot and tannic acid; but the hæmaturia still continued, Catheterization was necessary because of the clotting of the blood in the bladder. This catheterization, somewhat to our astonishment, had to be frequently performed; at first, every six or eight hours; later, every two or three hours, and finally even every hour. Towards the last, catheterization was performed by an intelligent medical student. Symptoms of cystitis appeared some time be the patient's death; vesical tenesmus, the appearance of mucus in the urine, together with tenderness and pain in the region of the bladder, and a slight temperature, 99° F. to 102° F. All these symptoms gave evidence of cystitis, and possibly of a slight form of sepsis from the cystitis. The patient gradually became weaker and weaker, and, after an illness of about ten weeks, died. The autopsy findings that were of interest were the following:

The right kidney showed merely the changes of chronic interstitial nephritis or contracted kidney. This kidney, which I hold in my hand, you see is diminished in size; the capsule is adherent in places, the cut surface shows the diminished cortex, with characteristic cysts scattered here and there throughout the kidney. One of these cysts is still unopened. This finding is, perhaps, of no interest, except from this fact, that had operative procedures been instituted in this case, and the left kidney, the one containing the sarcoma, been removed, it is probable that death would have ensued, for this contracted kidney could not do the work of two perfect organs. The left kidney was much enlarged; there was a subcapsular and also a perinephritic hæmorrhage. The upper portion of the kidney was occupied by the new growth. Several microscopists have taken sections from this specimen, so that there is little left of the new growth, yet enough remains to show by the difference in color, feel, and contour, the outlines of the tumor. This on microscopical examination—the examination being made by Dr. Hektoen—was proven to be a sarcoma.*

A third finding of interest, and especially from the light that was thrown on the history of the case by Dr. Earle, was the condition of the gall-bladder, though this has nothing at all to do, so far as can be judged, with the late history of the case. The gall-bladder was small, shrunken or atrophied, contained no bile, had no outlet, the cystic duct being represented by a strip of fibrous tissue. The walls of the gall-bladder were tough and leathery to the feel, and appeared to the naked eye to contain a large amount of fibrous tissue. The gall-bladder contained about thirty gall-stones of varying sizes and shapes, as can be seen in this specimen. There had evidently been a previous cholecystitis where adhesive inflammation had taken place in the cystic duct, resulting in its perfect occlusion and consequent atrophy of the gall-bladder. The moment we found this condition, Dr. Earle said that about ten years before, the patient consulted him for what he regarded as a stomach trouble. It had baffled the skill of several physicians, and the patient made weekly pilgrimages from the South Side to Dr. Earle to receive the treatment that he had instituted. There was quite severe, vague, indefinite pain in the region of the stomach, which gradually disappeared. The disappearance of the pain of course was due to the abatement of the inflammation, the closure of the duct, and the gradual atrophy of the gall-bladder.

A fourth finding, which we came near overlooking, is this: I had almost forgotten to make an incision into the urinary bladder. Drs. Earle and Hoadley had left the room, and there was no one there but the medical student, the son of the dead man, and myself. I cut into the bladder, and the medical student with difficulty suppressed an exclamation of surprise as I lifted this—a broken half of a catheter—into view. And now the question arose, Who introduced this catheter? Dr. Earle knows that he did not; I was absolutely certain that I had not done it, and the medical student said he was innocent. There were then but two persons left who could have done it, the dead man and his daughter. The daughter remarked to us at one time that she thought it was not necessary for a doctor to come over in the night to introduce the catheter, that she could do it and thus save the extra expense if we would allow her to do so. She, perhaps, passed some old catheter, which broke off, and never reported the circumstance to us. This accounted, possibly, for the cystitis from which the patient suffered; also for the tenesmus of which he complained, and for the frequency with which we had to catheterize. The son who stood right there never had the slightest suspicion of anything unusual in the post-mortem findings of the case.

The interest in this case is enhanced by the fact that no other sarcomatous foci were found in chest or abdomen, the sarcoma being apparently primary, a condition of rarity. The cranium was not opened.

*Sections examined by Drs. A. E. Hoadley and G. H. Weaver were pronounced sarcomatous.

MULTIPLE ABSCESSES OF THE LIVER.

This patient came under my care in the Presbyterian Hospital about two months ago. The patient was a married woman of 23 years of age. The brief history showed that she had enjoyed excellent health up to one year prior to her entrance into the hospital, barring one exception, at the age of 12 she suffered from what seemed to be a simple attack of ordinary jaundice. Twelve months before entering the hospital she was taken with a pain in the right hypochondriac region, and was obliged to call in a physician. He suspected the passage of gall-stones, and directed the examination of the stools. No stones were detected. Again, at three different times she was compelled to call in a physician for a recurrence of these severe attacks of pain in the right hypochondriac region. Morphia was required in every instance, the pain lasting from a few hours to one or two days. Jaundice never followed any of these attacks. One week before coming from Wisconsin to enter the hospital, she went to bed one night in perfect health and was suddenly seized with severe pain at one o'clock in the morning. It was thought to be a recurrence of the old attacks of pain in the right side. Morphia was required in this instance, but the pain did not leave as it had previously done. It continued for two or three days, then jaundice began to appear. This alarmed the patient, especially as a slight temperature began to develop. The friends hurried her off to Chicago that she might seek aid there. Upon admission to the hospital, a diagnosis of gall stones with impaction was made, and the question of surgical interference at once came up. After two days' delay, until the patient's friends had arrived from Wisconsin, it was decided not to operate. The case was seen by Drs. Stehman, Graham and Senn, and it was deemed inadvisable to operate because of the low condition of the patient, and the wide diffusion of the inflammation, apparently septic, in so many organs. Tenderness over the upper abdomen with tympany indicated a quite extensive peritonitis. The physical signs, rapid breathing, etc., gave evidence of consolidation of the lower lobe of the right lung, and the anterior portion of the lower lobe of the left. Moreover an endocardial murmur at the mitral valve had developed, and the temperature ranged from 102° F. to 104° F. It seemed certain death on the table if we resorted to an operation. The patient lived much longer than any one expected. For over two weeks her temperature was of an irregular character, often higher in the morning than in the evening. There were sweats but no marked chills. Death occurred about two weeks after admission to the hospital.

The post mortem was made the same afternoon, and the findings in the case showed in the common duct, a solitary smooth, oval gall-stone about the size of a small pigeon's egg. This was situated so as to nearly close the outlet of the duct into the duodenum. This gall-stone lay directly opposite an abnormal opening in the duodenum, which was not large enough to admit of the passage of the gall-stone.

Adhesions had taken place between the duodenum and the common duct; by pressure, atrophy, or ulcerative process there had been formed this new communication between the duct and the intestine. It is probably that had life continued the opening would have grown large enough so that the gall-stone would have dropped into the duodenum, and in this way appeared in the stools. Not only were there adhesions between the duodenum and the common duct, but the peritonitis had resulted in adhesions between the stomach, diaphragm, liver, omentum, and intestinal coils in the upper half of the abdomen. Through this new opening, which existed between the common duct and the duodenum, it is probable infection took place —certainly infection had taken place in some way, for there existed a suppurative cholecystitis, a suppurative cholangitis, multiple abscesses of the liver. The liver on section seemed to be riddled with small abscesses of various sizes. Two, the largest, were the size of a walnut. These were filled with bile-stained pus. In the lower lobe of the right lung there was found consolidation, the appearances of pneumonia in stage of resolution, as also in the lower lobe of the left lung in its anterior and internal portions. These points of consolidation were exactly opposite the adhesions between the lung and the diaphragm, and the diaphragm and the liver. Changes characteristic of recent vegetative endocarditis were found on the mitral and aortic valves.

This case is of interest from an etiological standpoint. An abscess of the liver is rarely primary, save in those cases originating in traumatism. A punctured wound may give entrance to the infective agents; a severe contusion, or a punctured wound from a fractured rib may furnish a point of least resistance where localization of the pus microbes will excite suppuration.

Secondary abscesses may originate in suppurative disease in a neighboring organ.

Purulent pleuritis, or pericarditis; the perforation of a gastric or duodenal ulcer, where adhesion between the stomach or duodenum and the liver had existed, may be the starting point of an hepatic abscess. Metastatic abscesses in the liver often occur, the primary focus being distant. The commonest cause is suppuration in the abdominal organs, whose veins go to make up the portal vein. A dysenteric ulcer, with suppuration, may cause thrombo-phlebitis in one of the radicals of the portal vein. A fragment of the thrombus is detached. When this, being septic, lodges in the liver, it excites suppuration, and hepatic abscesses is the result. This is notably the case in the so-called tropical abscesses, In our temperate climates, however, gall-stones furnish the commonest cause of abscesses, at least of multiple abscesses. Constant irritation of the walls of the gall-bladder and of the ducts, and close proximity to the septic intestinal tract, with which there is direct communication by the avenue of the common duct, and at times, as in this case, by a patent new opening formed by ulceration, give the conditions favorable for suppurative inflammation of the gall bladder, and of the gall ducts. And if the inflammation extends into the intra-hepatic bile ducts, then the parenchyma is almost sure to become the seat of a suppurative inflammation.

I regret that I was unable to bring away from the case any specimens excepting the solitary gall-stone, which is an ordinary-looking one, and a small piece of the liver for microscopic section. The brother stood by and positively refused to allow anything more than that to be taken.

Dr. Charles Warrington Earle: The history of the case, as narrated by Dr. Herrick, together with the exhibition of the specimen, is, to me, exceedingly interesting, because I have followed the case for six or eight years. The patient was 65 or 70 years of age, and lived on Fulton street when I first saw him. At that time he was a well-nourished man, which was still true when he took his bed in his last illness. There has never been a symptom in his entire history that pointed to a malignant disease. He certainly had no cachexia; on the contrary, he was rather ruddy, and his nutrition good, for a man of his age. He enjoyed life remarkably well, and, with the exception of occasionally an attack of pain in the vicinity of his stomach, or what afterward proved to be his gall bladder, had little cause to consult a physician. I do not now remember the complaint from which he was suffering when I first saw him; but for the pain in his stomach, a prescription consisting of muriatic acid, a little pepsin, and pancreatine gave great comfort, and this combination was given many times. I find, upon looking in one of my case-books, that at one time in his history I prescribed cimicifuga and salicylate of soda. It has occurred to me that it is just possible he may have had symptoms of lumbago, although I cannot now remember. If he ever had even a backache, or anything which pointed to malignant disease, I fail to remember it, and also neglected to make any record of it. He was extremely well nourished at the commencement of what proved to be his last sickness, and only took to his bed after repeated hæmorrhages from the urinary tract, and its consequent exhaustion. There was no supposition, even at this time, that there was malignant disease. I believe malignant disease of the kidneys was excluded, largely on account of his good nutrition and lack of cachexia. His principal symptoms were profuse hæmorrhage from the urinary tract, gradual prostration, failure of his strength, terrible vesical tenesmus, and finally more or less collapse and death.

I think we were all surprised when we found sarcoma in the kidney, and more especially were we surprised when we found a catheter in his bladder. As Dr. Herrick has said, he did not introduce it, and I am sure I did not.

LAPAROTOMY UNDER LOCAL ANÆSTHESIA.

Schleich (*Berliner klin. Wochenschrift*, No. 35, 1891), reports three cases in which he performed laparotomy, after inducing local anæsthesia with ether and cocaine. The patient first inhaled only sufficient chloroform to render her partially unconscious. The abdomen was then sprayed with ether until the skin was rendered insensitive. Between forty and fifty superficial and deep injections of a weak solution of cocaine (three-fourths of one per cent.) were then made along the line of the proposed incision, no more than a grain of the alkaloid being used. In order to increase the action of the drug the extremities were encircled with Esmarch's bandages. In the operations described (two ovariotomies and a gastrostomy) the patients were entirely conscious throughout the operation, and stated that the pain was slight, even when peritoneal adhesions were separated. They had no unpleasant symptoms, and made a good recovery. The method is recommended in cases in which ether and chloroform are contra-indicated.—*Amer. Jour. Med. Sci.*

SELECTED FORMULÆ.

TONSILLITIS, RAPID CURE.

℞ Tinct. verat vir. (*Norwood*).....30 drops.
Morp. sulph.....½ grain.
Aq. dest.....9 drams.
M. Sig. Teaspoonful every hour for two hours, and then every two hours as needed.

—*Med. Rec.*

SCROFULA.

Iodine and iodoform give better results than the alkaline iodides. To young children tincture of iodine may be given, one drop daily in a little thin porridge made of farina and milk. Besnier prefers the use of iodoform, which may be given continuously for a long time. He prescribes it after the following formula:

℞ Iodoformi.....gr. iss.
Mellis.....℥ iv.
M. Sig. One or two teaspoonfuls to be taken.

—*Le Bulletin Médical.*

FALLING OUT OF THE HAIR.

The following is recommended (*O Galenos*, Etos 1, Arithmos 9) in falling out of the hair:

℞ Quiniæ sulphat.....℥ j.
solve in
Acid. sulphuric., q. s.
adde
Aquæ communis.....fl. ℥ viij.
Aquæ melissæ.....fl ℥ j.
Boraci venetic.....℈ ij.
Apply to the scalp two or three times a day.

PHOSPHORUS IN RICKETS.

Nettenheimer, according to *Les Nouveaux Remedes*, proposes a new formula to replace that of Kassowitz, who is well known as an expert in such matters, and whose formula is as follows:

℞ Phosphori.....gr 3-20.
Olei amygdal.....℥ xxv.
M. Sig. A teaspoonful to be taken once daily.

Nettenheimer recommends the following as superior:

℞ Phosphori.....gr. 3-20.
Ol. amygdal. dulc.....℥ vijss.
Pulv. sacchari alb.,
Pulv. gum arab.....āā ℥ ivss.
Aquæ destillat.....℥ ij.
M. Sig. A teaspoonful at a dose.

ECZEMA OF THE VULVA.

Dr. Lusch (*L'Union Médicale du Canada*, No. 9, 1891) speaks highly of the following:

℞ Sodii bicarbonat.....grammes 4.
Potassii bicarbonat.....“ 2.
Glycerin neutr.....“ 8
Tinct opii.....“ 4.
Aquæ.....“ 175.
Apply locally, and then dust on—
℞ Amyl. pulverizat.....“ 98.
Camphor pulverizat.....“ 2.

ACUTE ECZEMA.

Dr. Alexinski (*La Semaine Médicale; L'Union Médicale du Canada*, No. 9, 1891) uses the following:

℞ Zinci oxydat.....grains xv.
Bismuthi subnitrat.....“ xxx
Amyl. pulverizat.....℥ iss.
Lycopodii pulverizat.....℥ iss.
Dust in on the parts affected nights and mornings.

SALOL AS A COATING FOR PILLS.

In consequence of the fact that Salol is not dissolved in the stomach, but is only attacked by the pancreatic juice after it reaches the intestine, Dr. Ceppi suggested its use for coating pills intended not to act *before they enter the intestines*. Dr. Yvon publishes (*Union Pharmaceutique*) the following formula for the purpose in question:

Salol.....grammes 2.
Tannin.....“ 0.5.
Ether.....“ 10.

With this solution the pills are varnished several times, until the protecting layer is sufficiently thick. The entire operation—Dr. Yvon states—does not occupy more time than is required in varnishing with Tolu Balsam.

TREATMENT OF FAVUS.

Dr. Kerley (*La Semaine Médicale*, No. 53, 1891), in the treatment of favus, employs the following:

1. ℞ Hydrarg. corrosiv.....centigrammes 12.
Alcohol, q s.,
Petrolei, } āā grammes 15.
Ol. olivar, }

2. ℞ Alcohol absolut.....grammes 30.
Iod. pur., q. s. to obtain a saturated solution.
For external use.

Sponge and rub the favus spots and the adjacent surrounding skin one day with the first solution and the next with the iodine solution. Continue until a slight irritation of the skin supervenes, then interrupt the treatment a few days and apply an indifferent salve, when the treatment may be recommenced

The writer asserts that a case of favus may thus be cured, on an average, in six and a half weeks.

BLOOD POISONING.

℞ Eucalyptol (Sander).....½ ounce
Syrup simplex.....1½ ounces.
Aquæ.....2 “
One teaspoonful every one or two hours.

CHOREA.

Benedikt recommends the following treatment:

℞ Fowler's solution.....2 to 3 parts
Distilled water.....222 parts.
Simple syrup.....30 “
M. Sig. Tablespoonful three times a day.

If there exist articular pains, give sodium salicylate for some days. Apply the continuous current along the vertebral column. Avoid narcotics, particularly hydrate of chloral. Desnos has used exalgine with marked success.—*Medical Abstract, June, 1891.*

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LEADING ARTICLE.

ELECTROTHERAPY.

So much has been said recently in medical literature on the subject of electrotherapy, and so vast is the amount of conflicting evidence brought to light by able exponents of both sides of the question, that the subject is one that should be approached with caution.

Foremost among the most recent dissertations on this subject is the article contributed to the *Progrès Médical* in one of its recent numbers, and which has also been discussed in other French medical journals, notably the *Revue Médicale.*

The writer of the article alluded to, Dr. Vigouroux, deals with the subject broadly and succinctly, basing his conclusions both on extended personal observation and a careful review of the experience of others. He refers to the three principal methods for the application of electricity: *Faradism, galvanism,* and *static* electricity or *franklinism.*

Faradism consists in the employment of an induction current, viz., an interrupted current; galvanism of a continued current; and static electricity or franklinism, of a current produced by the so-called electric machines of Ramsden, Holtz, Carré, Winshurt, etc., by which the electricity is generated through friction.

There are important differences in these three methods of applying electricity. In the first two generally but a part of the body of the patient is placed in the circuit between the two poles, while in franklinism, the patient being isolated from the ground, represents a continuation of one pole of the machine, the current being diffused through the entire body. In consequence, faradism and galvanism are essentially applicable for local medication, while franklinism may be found more useful in general medication, but has also a field of usefulness in local use.

Another fundamental point of difference between these three forms of electricity lies in the potential quantity (tension) of each. In this relation we find galvanism and franklinism radically different from each other. The

potential quantity of electricity in galvanism is never above a voltage of 50 or 60, while in franklinism it is very high, ranging from 100,000 to 150,000. The strength of the current is in inverse proportion to the voltage; thus, in franklinism an extremely high voltage produces a weak current, while in galvanism a very low voltage produces a far more powerful current, this being occasioned by an increased amperage. In consequence, while the static current does not exert any pronounced chemical or magnetic action, its mechanical action is very marked; and, on the contrary, the chemical and magnetic actions of the galvanic current are relatively more intense. The induction or faradic current occupies a place between these two.

Therapeutically, the galvanic current will be found to produce, locally, chemical, physiological, and mechanical actions.

Regarding the chemical effects, these consist of supposed chemical decompositions in the fluids of the body, termed *electrolysis*. The bases and hydrogen approach the negative pole, while the acids and oxygen are attracted to the positive pole. Vigouroux, however, very positively asserts that under ordinary circumstances, chemical or electrolytic actions are not observable. The mechanical effects consist in a displacement of liquids in the course of the current.

It is the physiological action that is most important, and this is manifest in the phenomena of excitation. All organs and excitable structures react in some form according to their specific properties, such reaction continuing as long as the electric current is applied. In order to obtain these results it is necessary that the current is interrupted with sufficient frequency.

The difference of the actions of electricity at the two poles is very noticeable. At the negative pole we find an afflux of liquids, hyperæmia owing to dilation of the blood vessels, and an increased excitability of the nerves. At the positive pole the conditions are directly opposite: anæmia caused by contraction of the arterioles, reflux of liquids, and a diminution of the excitability of the nerves.

Practically, therefore, the physiological actions of the two poles are in opposition to each other; the negative pole congests and excites, while the positive pole depletes and depresses.

Apart from these, electricity exerts a general action, which is commonly partially or entirely overlooked, and which consists principally in an increased activity of calorification and respiration, and, finally, in a sensation of well-being—euphoresis—indicating a widespread action on nutritive processes.

This general action, while almost *nil* in galvanism, is more marked in faradism, and reaches its maximum in franklinism.

The electrical current should, in all cases, be applied by the physician himself, and for this purpose it is by no means essential that he should be a specialist.

Regarding the therapeutic application of electricity, Dr. Vigouroux has limited himself exclusively to the nervous system. While a detailed account of his experiments would prove interesting reading, we are forced to content ourselves with a brief recapitulation of his results.

There is nothing to prove that when electricity is applied to the head in the ordinary manner, this organ is in any way affected by the current. The various phenomena that are apparent during the application of the current, such as a metallic taste, ringing in the ears, and vertigo are all explainable by an excitation of the nerves of sense, or other indirect actions. The only possible way in which the brain might be influenced is through a reflex action.

In diseases of the medulla, the author found that this organ, like the brain, was unaffected by electricity.

In neuroses, in the treatment of hysteria and neurasthenia, the principal treatment is to improve general nutrition; for if we treat these conditions locally, by electricity, we are more apt to set up a condition worse than that of the original malady. In children, for instance, hysteria is often manifested in the form of contractions, etc.

In children the general treatment of these neuroses should consist in franklinism, to the

entire exclusion of hydrotherapy, but coupled with cautious internal medication.

In chorea in children, especially the type which is frequently followed by relapses, franklinism will frequently be found most useful.

In "tics," true "tic" is incurable by electricity, as well as by other means. Pseudo or false "tic" is easily conquered by franklinism.

In progressive myopathies, atrophic or pseudo-hypertrophic, electricity is only valuable as a means for diagnosis.

In muscular atrophy, consecutive to arthritis, viz., simply atrophy (resulting in long immobilization of a limb consequent to a fracture or some other injury) and amytrophic spasmodic paralysis. The treatment should consist of franklinism, applied both generally and locally, to the affected muscles.

Good results are seldom attainable in atrophic paralysis. Most frequently the application of the current is entirely ineffectual.

In infantile paralysis, multiple neuritis, or acute polyneuritis, little is to be gained by electricity.

In the local treatment of the majority of peripherical paralyses electricity is certainly useless, and often absolutely harmful.

In conclusion, Dr. Vigouroux is of the opinion that electricity is entitled to a prominent place in therapeutics, but that its use should always be undertaken with caution.

SALT LAKE MEDICAL SOCIETY.

The annual meeting of the Salt Lake Medical Society was held in the Chamber of Commerce Hall. There was a large attendance of the members.

The following officers were elected: Dr. G. W. Foster, president; Dr. S. Ewing, vice-president; Dr. E. F. Root, recording secretary; Dr. J. C. E. King, corresponding secretary; Dr. J. J. MacAckran, treasurer; and Dr. Union Worthington, librarian.

The treasurer reported that there was $168 in the treasury.

Other reports which were read showed that there was an enrollment of fifty-two members and that new members are constantly being received.

BOOK REVIEWS.

SAUNDERS' QUESTION COMPENDS, No. 23. ESSENTIALS OF MEDICAL ELECTRICITY by D. D. Stewart, M. D., Demonstrator of Diseases of the Nervous System and Chief of the Neurological Clinic, in the Jefferson Medical College; Physician to St. Mary's Hospital, etc.; and E. S. Lawrence, M. D., Chief of Electrical Clinic and Assistant Demonstrator of Diseases of the Nervous System in the Jefferson Medical College; Physician to Dispensary of St. Christopher's Hospital for Children, etc. Cloth, with 65 illustrations. Price, $1.00.

This number of the series of compends recently issued by this publishing house is certainly one of the most useful, and treats of a subject which is generally much neglected in the education of medical students. It will undoubtedly prove a practical help to the practitioner also, and its size will render it a valuable addition to any doctor's library, containing as it does, much practical knowledge of a wide subject in a very small compass. During the last few years the tendency has been to print too many of these quiz-books, but the present one should fill a "long felt want" because it presents in a readable form a concise synopsis of a subject not often treated in this class of works. We take pleasure in recommending it to the profession generally, and to the student in particular.

THE RATIONAL CURE OF DEAFNESS AND DISCHARGES FROM THE EAR. The Modern Treatment for the Radical Cure of Deafness, Otorrhœa, Noises in the Head, Vertigo, and Distress in the Ear. By Samuel Sexton, M. D., author of "The Ear and its Diseases," etc., etc.; Assisted by Alexander Duane, M. D., New York: J. H. Vail & Co., 1891.

The reputation of the chief author of this communication upon the radical cure of deafness and discharge from the ear is sufficient proof that it will receive a wide reading at the hands of the profession. Apart from this fact, however, the subject dealt with is an extremely important one, and the clinical experience which is detailed in the book adds greatly to its force. It consists of a reference to the old operation for relief of these troubles, with remarks upon the reasons why it failed to be of permanent benefit, and followed by a clear and concise description of the operation as practiced by Dr. Sexton, succeeded by a consideration of the indications for the operation. The authors contend that in all cases of chronic catarrh of the middle ear, attended by deafness, unpleasant noises, etc., it has proven in their hands a permanently curative procedure; and they detail cases illustrating its good results. The

subject matter of the book is chiefly taken from former papers by Dr. Sexton, while many details regarding indications for treatment and operation are wholly new. It is an attractive little book, exceedingly well written, printed in very readable type, and combines in a few words the essential points of an extremely important subject.

LITERARY NOTES.

A pathetic interest attaches to the volume of *Lyrics*, by Cora Fabbri, about to be published by Harper & Brothers. The very spirit of youth and love and spring breathes through these sweet verses, which have a dainty finish and grace worthy the muse of Italy. It is difficult to think of their author as out of this bright world, but, alas! Cora Fabbri died at San Remo, on January 12th. An advance copy of her poems was sent to her early enough, it is to be hoped, to have given her a passing pleasure.

A STUDY OF THE MYSTERIES OF LIFE.

In a world where it is very desirable to be entertained, and not always easy to find entertainment, there is a great deal to be got out of a discreet consideration of the mysteries of life. They give one something to theorize about in odd moments, and to have theories about them gives one an interest in whole series and classes of facts which seem to fit in with such theories or to upset them. If the facts won't fit the theory, then there is the theory to change; and to have one's theory driven into a new shape is the next best thing having it justified.

There was a little tale in the newspaper the other day about Mr. Edison, that he held up his finger and bent it, and asked, "What does that?" Failing to get a satisfactory reply, he said he was trying to find out what is the force that pulls the strings that make animate creatures move. That is one of the great mysteries—the mystery of motion. It is that, we are told, that Mr. Keely, the motor-man, has been brooding over for several decades past. Mr. Keely's experience has not been such as to encourage any poor men theorize on this subject for a living; nevertheless, it is a great subject for a mind to dwell upon in its leisure moments. Sir Isaac was thinking about it when the apple fell and gave him an idea that was of value to him, and has been useful ever since. There is always this advantage about having one's mind run on something in particular, that even if it does not bring down what it is aimed at, it is more likely to hit something else that is worth while than if it was wandering aimlessly.—From "The Point of View," in February *Scribner.*

THE complete novel in *Lippincott's Magazine* for February, "Roy the Royalist," is by Mr. William Westall, and is a stirring tale of adventure in the wars of Napoleon. Though its events date back nearly a century, they are presented in the brisk and business-like modern manner. The hero, a dashing young officer of the British navy, prompt and capable alike in friendship, love, and war, meets Bonaparte while a prisoner in France, distinguishes himself in the defence of Acre, recovers a treasure concealed in a château of the Jura by its *ci-devant* owners, and finally settles in his native Virginia.

PERISCOPE.

THERAPEUTICS.

TREATMENT OF HEADACHE OF GASTRIC ORIGIN.

Dr. Westphalen (*Berlin klin Wochenschr.*, No. 37, 1891,) discusses headache of gastric origin. He refers at the outset of two cases observed by him in connection with Dr. Moritz, and published by the latter. Although these patients did not suffer from headache, but were the subjects of obstinate intermittent fever, combined with skin eruptions resembling erythema nodosum, their cases are included in the present paper because Dr. Westphalen is of opinion that such symptoms are of gastric origin; that, in fact, toxic substances present in the stomach under certain circumstances are capable of producing, after absorption, various skin eruptions and disturbances of temperature on the one hand, and, on the other, disturbances of circulation in the central nervous system and its associated parts, a consequence of which is headache. In the two cases referred to attention was drawn to the stomach by slight dyspeptic trouble. The conclusions having been come to that the general disturbance was due to absorption of toxic material from the stomach, an indication presented itself in the fact that, in one of these cases, there was complete absence of hydrochloric acid from the contents of the stomach. The acid was prescribed in both cases; the fever and skin eruption disappeared, and the patient completely recovered. The author explains the success of the drug on the theory that the ptomaines or toxines of micro-organisms are

capable of exerting their detrimental influences only when there is a deficiency in the amount of free mineral acid in the stomach. The antiparasitic action of the normal gastric juice may be taken as proved in the case of certain species of bacteria at any rate. To the two cases first reported three others are now added. In one the skin affection present was erythema exudativum multiforme, in the other two urticaria. All were cured by hydrochloric acid. In one of the urticaria cases the outbreak was apparently prevented by this drug. The patient who suffered regularly from urticaria, accompanied by giddiness and a feeling of congestion in the head after eating strawberries, was induced to eat a quantity of them, and to take twenty drops of dilute hydrochloric acid fifteen minutes afterwards. The symptoms failed to appear.

The author next gives details of four cases of unilaterial headache associated with dyspepsia and following upon errors of diet. The patients had taken many drugs, such as antipyrin, antifebrin, caffein, phenacetin, without benefit; muriatic acid caused the headache rapidly to disappear. Further treatment consisted in the regular administration of the acid in association with mineral waters, and attention to the diet. Three of the patients recovered, whilst the fourth was materially benefited. In two of these cases also the headache was apparently prevented by the administration of the acid directly after the patient had eaten freely of some article the ingestion of which had hitherto been invariably followed by headache. Whilst believing that in very many cases the symptoms (headache, skin eruptions, fever), may with much probability be referred to the action of some poisonous product of bacteria, Westphalen remarks that in certain cases the nature of the noxious substance is obscure, as, for example, in those in which the symptoms mentioned follow the ingestion of such articles as chocolate and strawberries. But in the last class of case, also, muriatic acid is efficacious.—*Brit. Med. Jour.*

TREATMENT OF OZÆNA.

Dr. Demme states in the *Deutche Medicinische Wochenschrift* that he had found massage of the nasal fossæ the best treatment for ozæna, and one followed by good results in a very short time. The object is to produce a hyperæmia which is of an acute character, it having been observed that ozæna is frequently cured by a new acute rhinitis. The method of procedure is as follows: A metal sound has a wad of cotton wrapped around it at its extremity, the wad being about as hard as the pulp of the finger. A 20 per cent. pyoktanin lanolin ointment is employed. The movement consists of light, short, even strokes which resemble effleurage. This sitting should be of daily occurrence and last not more than one-half minute for each fossa. In many cases two sittings a week are sufficient. One pre-requisite is absolute cleanliness in the operation. The touch dispenses with the necessity of using a mirror, and in some of the more intelligent patients the author found that they could perform the massage themselves. He claims that a cure is effected in a few weeks.

PILOCARPINE FOR DRYNESS OF THE TONGUE.

Gelatine capsules containing from .003 to .006 grm. of pilocarpine are recommended to relieve dryness of the tongue. One of them is permitted to desolve on the tongue previously wetted with water. This causes a free flow of saliva for twenty-four hours, while it never produces any diaphoresis.—*Jour. Med. Par Revue Int. Bib.*

THE TREATMENT OF SCROFULODERMA AND LUPUS.

Dr. Brooke has somewhat modified the method of treating lupus by an ointment of oleate of mercury, salicylic acid, and ichthyol, which he published a year since. Finding in some cases the original formula too strong, he has reduced it, combined it with Lassar's paste, at the same time adding sufficient red Armenian bole and raw umber to match the color of the skin.

℞

Zinci oxidi,	
Amyli pulv.	ää ¼ oz.
Vaselini albi	½ oz.
Hyd. oleatis, 5 per cent.	1 oz.
Acidi salicylici	gr. xx
Ichthyolis	℥ xx
Ol. lavendulæ	q. suff

M. fiat ung. coloratum.

This, when well rubbed in and then covered with potato-starch powder, completely disguises the disease, and attracts very little attention. He sometimes diminishes the salicylic acid and increases the ichthyol. The action is most rapid in cases of scrofulodermic tumors and ulcerations, but is also pronounced in those in which lupus has developed from the scrofulodermic basis. In pure lupus the effect is distinctly weaker, especially in those where there is much sclerosis or old scarring.—*British Journal of Dermatology*, December, 1891.

CHRONIC DIARRHŒA.

Dr. Alexejewski (*Deutsche Medizinal Zeitung*, July 2, 1891) has found the flowers of the red rose to have long been held in high repute amongst the Russian peasantry as a remedy in chronic diarrhœa. He uses an infusion made with a handful of the dried flowers. Children up to five years may take during the course of a day a cupful.

A CASE OF IODISM.

A case came under my observation a few days ago which so well illustrates the ease with which an error is committed in a syphilitic subject that I cannot forego reporting it. I was in the act of leaving St. Mary's Hospital, having completed my visits to patients, when I was asked to see a young man in the waiting room who had applied for admission. I found a youth of about 20, well nourished, and of good muscular development. His appearance was that of health, except that his color was rather dusky, his eyelids puffy, the conjectivæ injected, and there was some swelling of the right orbital region. There were also a half dozen cicatrices on the face, one of them on the chin, another on the side of the nose, a third involving the eyebrow, each of them a half inch in diameter, flat and white. The patient complained that he had suffered for a month from a frontal headache, gradually increasing in severity, of the swollen condition of his face, and of some tenderness of the frontal bone. Weakness was the only other symptom complained of, and this, the patient alleged, caused him to quit work and come to the hospital. He admitted having had a "bad case" of syphilis one year ago. There was no perceptible coryza. Without further examination, I recommended him for admission, and asked that he be given fifteen-grain doses of potassium iodide until I made my next visit.

Next morning I approached my patient in full anticipation that I would find in him an interesting case, some freak of constitutional syphilis, which would rapidly fade away under heroic doses of the iodides. But I found his condition so much worse than it had been the day before that I at once suspected the existence of iodism. I then learned that the patient had been under the treatment of a druggist—enough to account for any conceivable catastrophe.

All treatment was suspended, and in three days the patient was dismissed entirely cured.—*James M. French, in Jour. Med. Coll., Ohio.*

RHUS AROMATICA IN THE TREATMENT OF INCONTINENCE OF URINE.

In the *Buffalo Medical and Surgical Journal*, October, 1891, Dr. Wm. C. Krauss, of Buffalo, sums up his experience in nine cases as follows:

Incontinentia urinæ, due to slight disorders of the genito-urinary or nervous systems, is amenable to the rhus treatment, and gives most favorable results.

Incontinentia urinæ, due to destructive lesions of the spinal cord, complicating the vesical centre, or its reflex arc, is not amenable to the rhus treatment, and gives negative results.

BENZINE IN PEDICULOSIS.

Nedzwiecki strongly recommends (*Saratovsky Sanitarnyi Obzor*, No. 19, 1891) ordinary commercial benzine as the most effective, cleanly, and convenient application for destroying pediculi capitis or pubis. The affected parts should be freely bathed with the fluid for three or four minutes. Both pediculi and nits are killed almost instantaneously. As a rule, a single application is sufficient, even in severe cases. The smell of benzine is said to disappear very quickly. The remedy can be safely applied, even in the presence of an eczematous rash, since it causes only trifling pain, which soon passes off. In the case of out-patients, the treatment must always be carried out in the day time, as the substance is extremely inflammable.—*Brit. Med. Jour.*

HYDRATE OF AMYLENE IN EPILEPSY.

Dr. Edwin Dunn has given a trial to this remedy, recommended by P. Naecke for epilepsy. He gave it to fourteen patients for twelve weeks, in half-drachm doses three times a day for the first four weeks, and for the remainder of the time four times a day. Twelve of the patients had been previously under the treatment with bromide of potassium. In three the number of fits was increased; in four the number diminished; and in three the number remained the same. Two died in a status epilepticus, one in the first week, the other in the twelfth. Of the two patients not previously treated, in one the drug had no effect, in the other the number of fits was diminished by one-third. During the early weeks of treatment there was a marked improvement in the mental state, but this is probably due to the leaving off the bromide, for after the first month there was a marked tendency for the patients to

pass into a status epilepticus, and in no case ultimately was the mental condition of the patient improved. There was no change one way or the other in regard to bodily condition. He concludes that it was perhaps beneficial in some of the less severe cases, but that in the graver forms it was useless, and that it possesses no advantage over the ordinary bromide treatment.—(*Journal of Medical Science*, October 1891.)

STERILIZATION OF MEDICINES FOR HYPODERMIC USE.

On making gelatine plate cultures from the more commonly-used hypodermic solutions, Dr. Marinucci reports in *Riforma Medica*, October 25th, that some, especially those of eserine and morphine, were teeming with bacteria. He next proceeded to test the effects of sterilization on the above solutions, the method employed being either to boil them or to expose them for a time to a temperature of 100° C. in a Koch's steam sterilizer. He then tested the activity of the solutions thus treated as compared with the same before sterilization, and came to the following conclusions: In all the preparations studied there may develop microbes, of which, however, probably not all are harmful. Sterilization by heat does not alter solutions of strychnine, curare, bi-hydrochlorate of quinine, or borate of eserine; enfeebles but does not alter the character of the action of morphine and atropine, so that the sterilized liquids must be used in larger doses than the non-sterilized ones; it seriously alters sulphate of eserine, rendering the solutions in great measure inert. The solutions unaffected by heat may be sterilized simply by boiling for a time in a *bain-marie*. It is recommended also to sterilize the hypodermic syringes in the same manner. For those solutions which are found to be altered by heat, an excellent method of keeping them sterile is to add corrosive sublimate in the proportion of 1 to 10,000. This is perfectly efficient, and is in no way harmful to the active drug.—*Boston Med. Surg. Jour.*

TREATMENT OF INTESTINAL OBSTRUCTION.

Washing out of the stomach, as first recommended by Kussmaul, in intestinal obstruction, is regarded by Aufrecht as a useful addition to our therapeutic measures. The difficulty is to determine in which cases and under what circumstances it should be carried out, as it is not equally applicable in all cases. On the ground of experience Aufrecht recommends two special indications. The first and most important of these is distension of the stomach, where vomiting is not present or has ceased suddenly. It is estimated that this condition is seen in about one-fifth of all cases of ileus, and its recognition may be made by percussion, the extended deep full note distinguishing it from a distended colon. The absence or cessation of vomiting is often looked upon as being due to the œsophagus being folded over the opening in the diaphragm, and its lumen blocked. However that may be, introduction of a tube takes place without difficulty, and evacuation of a large amount of fluid gives great relief, often without any washing out. A further indication is the occurrence of feculent vomiting. Repeated cleansing of the stomach removes the abnormal contents, and prevents the absorption of injurious material. Aufrecht pleads for the use of morphine in all cases—used subcutaneously. It should be given three or four times daily, according to need, until the patient is free from pain and peristalsis is kept within bounds. Its use by the mouth should be discontinued, its action not being prompt, and the amount absorbed uncertain. Large injections into the bowel he has long ago given up. Only in the very early days can one hope to obtain any useful result. He tried intestinal puncture on two occasions, but no particular good was observed, and he was dissuaded from continuing it by peritonitis being set up in one of the cases.—(*Therapeutische Monatshefte*, part viii. 1891.)

MEDICINE.

DEGENERATION OF THE SOLAR PLEXUS IN THE INSANE.

Several experimenters have found that by inducing lesions of the solar plexus in animals they were able to produce glycosuria, acetonuria, and albuminuria. A knowledge of these results led Dr. Cristiani to see whether the same abnormal substances occurred in the urine of mental patients suffering from degeneration of the solar plexus, a lesion which has been found by him to be evidenced by a so-called "vaso-paralytic diarrhœa." (*Riforma Med.*, September 17th, 1891). This triad of symptoms, if it were found to occur constantly in such patients, would be a valuable aid in the diagnosis and prognosis of this form of diarrhœa. With this object the author undertook the examination of the urine of 10 such patients, comparing the results with others obtained in 15 cases of simple intestinal catarrh and in a similar number of patients without diarrhœa. The

results are as follows: Glycosuria and albuminuria were found in all the first 10 patients, but were absent in the 30 others examined as controls. From a large number of observations by the same author these two signs seem to be very rarely present in asylum patients not suffering from nervous diarrhœa. Acetonuria, which is a constant and lasting phenomenon after experimental lesions of the solar plexus in animals, was entirely absent in the cases observed. As regards the glucose and albumen, either one or the other or both together, would be found on various occasions. In regard to the period of the disease, these symptoms were inconstant as to time of appearance or duration. The fact remained, however, that in the patients with diarrhœa originating in solar disease they were sure to be discovered sooner or later, if daily analyses of the urine were made, while in the urines of the others no such abnormal products were discoverable.—*Brit. Med. Jour.*

CEREBRAL ACETONÆMIA.

Talamon, in an interesting paper, states that a group of nervous symptoms comparable to those of urœmia has been described under the name of acetonœmia, a condition characterized by a reddish color imparted to the urine on the addition of perchloride of iron, and by the peculiar acidity of the breath, which exhales an odor that has been compared to that of chloroform, and which in reality is the odor of acetone or of ethyldiacetic acid. Various observers have concluded that the nervous symptoms were due to acetone acting upon the organism in the same manner as chloroform. The precise pathogeny of this toxæmia, however, has not been chemically elucidated any more than has that of urœmia or cholœmia. The substance which with the perchloride of iron causes the red reaction in the urine may be ethyldiacetic acid (Gerhardt) or diacetic acid (Jaksch). The symptoms of poisoning may result, not from the isolated action of one of these substances, but from a series of chemical decompositions, of which the acetone and diacetic acid are but ultimate products of little importance. Acetonœmia has especially been observed in diabetes and in diabetic coma. Peters and Kaulich have, however, noticed that the odor of the breath and the reaction of the urine are observed not only in diabetics, but also at times in the course of the eruptive fevers in children with measles and scarlet fever.

The searches of Jaksch have confirmed this observation, and have shown that normally the blood and the urine always contain traces of acetone, the quantity of which may be increased in the anaxthemata and in different chronic maladies, particularly carcinoma. Jaksch recognizes three varieties of acetonuria—the diabetic, the febrile, and the carcinomatous. According to him the nature of the febrile process is a matter of indifference. He has noticed this symptom in pneumonia, in typhoid fever, in acute articular rheumatism, and in the eruptive fevers. He has even observed pronounced acetonuria in a case of mania without fever. Acetonuria and diaceturia may thus exist without acetonœmia; in other words, the red reaction of the urine with the perchloride of iron may be produced in the absence of symptoms of acetonic toxœmia. Talamon relates the case of a girl of fifteen with a history of an attack of acute articular rheumatism with endocarditis. On the fifth day the temperature reached 105.8°, and the girl presented a condition of marked nervous excitement and delirium, this being characterized by incessant agitation and terrifying hallucinations, and accompanied by an odor of acetone in the breath and a ruby read reaction of the urine with the perchloride of iron. The delirium lasted five or six days, and disappeared synchronously with the disappearance of the odor of acetone in the breath. From a study of the case reported, and from a review of the literature of the subject, Talamon concludes: 1. Certain of the nervous phenomena that appear in the course of acute febrile diseases may be attributed to acetonœmic intoxication. 2. These acetonœmic phenomena are characterized by the peculiar odor of acetone in the breath and the ruby-red reaction that the urine presents with the perchloride of iron. 3. The delirious acetonœmia of articular rheumatism may simulate cerebral rheumatism, from which it is to be distinguished by the absence of hyperpyrexia and by the characteristics of the urine and of the breath. —*Lancet.*

REAPPEARANCE OF EPIDEMIC INFLUENZA.

Recent reports from widely separated countries show that there is considerable prevalence in scattered areas. From special inquiries which we have made we learn that influenza has been prevalent in Dundee since the second week in July, causing, we are informed, two or three deaths monthly, but since the beginning of the present month it has spread rapidly. A large proportion of the time of medical practitioners in the city

has been devoted to these cases. Whole families of five and eight persons have been laid up at one time. The only complications so far have been bronchitis and excessive prostration with a prolonged period of loss of appetite and want of energy. The epidemic has also appeared in Galicia, introduced, it is said, from Russian Poland and Russia. "Thousands" of cases are stated to have occurred in Lemberg and other Galician towns, and a few in Vienna. The epidemic is reported to be severe in Prussian Silesia, 500 cases and several deaths having occurred in the town of Münsterberg alone. Epidemic influenza is also said to have broken out in Paris during the past week. Advices from Victoria state that the disease is rife in Melbourne and has spread to the country districts. —*Brit. Med. Jour.*

PYREXIA AND ANTIPYREXIA—NERVOUS AND ARTIFICIAL.

Richter (*Inaug. Diss.*, Breslau, 1891), gives an account of some experiments made by him on pyrexia and antipyrexia. He first of all discusses the mechanisms by which the temperature can be lowered, and concludes, as a result of calorimetrical experiments upon animals in which fever had been artificially induced by the injection of infusion of hay, that fever consists in a shifting of the heat regulation mechanism. He therefore adopts Filehne's theory of fever. The difference between a nerve temperature and fever is next discussed, and the author does not believe that there is in the brain any heat centre of damage which can cause fever. He regards the pyrexia which may be brought about by damage to the corpus striatum as quite distinct from fever, being only a temporary disturbance of the heat-regulating mechanism.—*Brit. Med. Jour.*

WARM ETHER AS AN ANÆSTHETIC.

We learn from the *Independencia Medica*, of Barcelona, that on October 31, Dr. Giné y Partagás performed an operation for osteoma of the fibula on a woman, in the Hospital de Santa Cruz, of that city, the anæsthetic used being ether warmed to 31°C., which was administered by Dr. A. Diaz de Liaño, with an apparatus of his own invention. Anæsthesia was rapidly induced and was kept up for fifty-five minutes without any accident. The temperature of the ether remained at 31° nearly to the end, when it fell to 29.5°. The apparatus, which is called by its inventor an "Electrothermo-etherizer," has since been used in several other cases with equally satisfactory results, anæsthesia having, on one occasion, been kept up for two hours and a half without any ill effect. Dr. Diaz de Liaño claims that by his method the disadvantages both of cold ether and of chloroform are obviated. Our contemporary promises a full description of the apparatus at an early date.—*Brit. Med. Jour.*

SURGERY.

TREATMENT OF OLD ULCERS OF LEG.

Dr. Charles P. Elwert, of New York, writes the *Medical Record:* "I have treated in the past six months, at Demilt, Bellevue, and Vanderbilt Dispensaries, and also in my private practice, forty-six cases of varicose and other ulcers of the leg, and have obtained favorable results in thirty-four cases, by the following method: Cleanse the ulcer by irrigating with a solution of corrosive sublimate, 1 to 5000. Then dry thoroughly with absorbent cotton, and apply daily the following powder:

℞

Iodoform	3 ss.
Sulphate of cinchonidia	3 j.
Wood charcoal	3 ijss.

If any discharge appears after applying the powder, use absorbent cotton before applying the powder again. Advise the patient to rest and to keep the leg elevated. Keep the bowls regular with a mild laxative, and give some stimulating tonic to improve the condition of the general system. In the case of four patients the powder caused irritation, and the discharge was increased. On further examination of those patients I discovered the existence of Bright's disease. In six other cases, where the above treatment was not successful, a poultice composed of powdered wood-charcoal and matricaria was used for three or four days, until I obtained a healthy appearing surface to the ulcer; and I then applied daily the following solution:

℞

Tr. calendulæ	3 ij.
Aquæ camphoræ	3 viij.

After applying the solution, I strapped the ulcer with adhesive plaster, with good results in four of the above six cases, and gave laxatives and a tonic. As the treatment of chronic ulcers at the present day is not very successful in a large percentage of cases, especially in dispensary practice, the above treatment may be of use to the profession."

UNION OF CUT-OFF FINGERS.

Herr Gluck related among other things which he brought up before the Berliner Medizinische Gesselschaft (*Deut. Med. Zeit.*), the case of a butcher who cut off the distal phalanges of his middle and ring fingers with a cleaver. The reporter, forty minutes after the accident occurred, picked up the severed fingers from the floor, disinfected them, resected the bones and sutured carefully. A complete union took place. Sensation, however, only returned in six months. A difference in the length of the fingers which were injured, and those of the other hand could not be perceived. However, a certain amount of atrophy was observable in the ends which had been severed.

SPIRITS THYMOLINI, COMPOSITUS—A SUBSTITUTE FOR LISTERINE.

C. D. Lippincott writes (*Phar. Rev.*): Listerine, as introduced by Dr. Lambert, is a step in progressive pharmacy. This new antiseptic disinfectant and prophylactic has become popular in nearly all civilized countries. While a mechanical mixture in itself, it exhibits the manifold properties of its constituents, and occupies a prominent position in the long catalogue of medico-surgical and therapeutic agents of modern practice. While we justly admit we are indebted to Dr. Lambert for its introduction, yet as professional pharmacists we do not feel like being confined to the necessity of dispensing empirical or proprietary preparations; hence it behooves us to come to the front with a substitute, which we all may manufacture and which will, beyond doubt, prove equally efficacious in its object. Such a preparation I herewith respectfully submit for your careful consideration, and invite research and experiment, with a view to possible improvement of this formula. I also recommend the adoption of a definite term for such a preparation. To me the term Spirits Thymol Compound would not be inappropriate, conveying, as it does, an intelligible meaning to physician and pharmacist. The Lambert Pharmaceutical Company, of St. Louis, place their formula upon each bottle of their preparation as follows. They say: "Listerine is the essential antiseptic constituent of thymol, eucalyptus, baptisia, gaultheria and mentha arvensis, in combination. Each fluid dram also contains 2 grains of refined and purified benzo-boracic acid." Given internally, they advise one teaspoonful three or four times a day, either full strength or diluted with water, or in combination with other drugs. My formula for what, for the present, I will call Spirits Thymol Compound, is as follows:

℞

Acid benzoic, Sodium biborate	of each	ʒ i grs. xxxii
Boric acid		ʒ ii grs. lxiv.
Dissolve with the aid of heat in distilled water		ʒ xlviii

Then add

Thymol		grs. clx.
Eucalyptol, Oil of wintergreen	of each	drops xl.
Oil of peppermint		drops xxiv.
Oil of white thyme		drops viii.
Previously dissolved in alcohol (94 per cent.)		ʒ xxiv.
Mix the two solutions, add caramel		drops x.
Distilled water q. s. to make 1 gallon.		

Let the mixture stand 24 hours, and finally pass through a wetted filter.

OBSTETRICS.

TOBACCO IN OBSTETRICS.

Some practitioners take their *rôle* in the lying-room very much *au sérieux*, and act as if they considered themselves personally responsible for any little hitch in the arrangements, with the result that the parturient female is occasionally subjected to treatment which is, to say the least of it, startling. We cannot better illustrate the point than by a recently-published contribution from the pen of Dr. J. F. Bird, of Philadelphia. He relates having been called to a case of labor which resisted all the usual means of bringing about the dilation of the os. The labor was at full term, and the pains were excessively severe and regular. At his first visit he bled the patient, *horresco referens*, to the extent of sixteen ounces without the slightest effect. For the ensuing twenty-four hours he administered antimonials *ad nauseam*, with no better result. He then opened a vein in the arm, and again drew blood, *pleno rivo*, still producing no relaxation, although he carried the bleeding "as far as was consistent with safety." This resourceful practitioner's next inspiration was the pipe, and his patient had been smoking but a short time before nausea occurred, an din twenty minutes the dilatation was complete, and the child was expelled immediately, and in good condition. The success which attended his experiment on this occasion induces him, twent-five years after date, to urge upon his brethren to include a couple of cigars (quality no object) in their obstetrical armamentarium. He affirms the effect to be "magical" and "highly gratify-

ing." It is of course to be understood that such effects can only be obtained in women who are not acclimatized to the weed, but we gather from Dr. Bird's remarks that some of his patients took very kindly to the innovation both then and afterwards. Most doctors do not go further than themselves to smoke the pipe, but in future we may anticipate that patients will insist upon undergoing the treatment, and will decline to admit the *quid fecit per alter fecit per se.—Méd. Press.*

PRURIGO IN CHILDBED.

Krastilefsky (*Nouvelles Arch. d'Obstét. et de Gynéc.*, October, 1891, Supplement, p. 457) has recently published, in a Russian paper, a case where a woman, who had borne fifteen children, suffering on each occasion, from a week before delivery to the second day of childbed, from a general idiopathic prurigo. No cause could be discovered for the cutaneous trouble. Great relief was afforded by hot baths, and by a lotion composed of carbolic acid 4 parts, glycerine 30 parts, and distilled water 180 parts.

IMPREGNATION FROM SEMEN DEPOSITED ON THE VULVA.

R. C. Longfellow, *Cincinnati Lancet Clinic*, 1891, p. 633, saw patient who denied ever having indulged in sexual intercourse. Her companion afterwards gave Dr. Longfellow the following particulars: "Some three and a half months before, he had attempted to introduce the penis in the vagina. It was impossible to do so on account of the pain given to the lady, but soon an emission of semen occurred on the vulva. Soon after they left his office without making any toilet, the semen being allowed to remain on the vulva over night. This only occurred once between them, and the next menses did not appear, as also the second and third, which was attributed to a cold. She becoming anxious, asked him to consult a physician and get a recipe."

The lady was asked to come to the office, and was persuaded to have an examination made, to confirm my diagnosis. When examined, the vulva presented a virgin condition, a thin hymen present, and the vaginal orifice so small as to hardly admit the small finger. In so doing the hymen was ruptured. As there was no vaginismus present, the disparity of the sizes of penis and vaginal orifice gave conclusive evidence that no penetration had occurred.

AIR IN PARTURITION.

Dr. P. McCahey, in an article in the *New England Med. Monthly*, says that the subject of the utilization of air in the function of parturition is an interesting and important study, and promises to furnish a means by which many accidents, hitherto unavoidable during labor, can be prevented.

He is aware that some will disbelieve that air exerts any direct influence in parturition, but when they consider that it is employed as a mechanical agent by many other organs of the body, they ought not to deny to the uterus the privilege of availing itself of the assistance of this powerful force.

Prior to the rupture of the membranes there is probably no air within the uterine cavity, except that which is held in solution in the amniotic liquor.

Immediately after the rupture of the membranes, however, air enters the uterus, and takes the place of the liquor amnii which has escaped. This displacement of fluid by air can be readily recognized by simple percussion of the uterine globe.

Percussion before escape of the amniotic liquor will give universal flatness or dullness. Percussion after their escape and throughout the second stage, will give diminished dullness over the fœtal parts, but distinct resonance at or near the fundus, and on the sides, *i. e.*, above and on each side of the child. Percussion after the expiration of the third stage, when the uterus has contracted into a hard ball, will give general dullness again. Percussion several hours later, when the uterus has become slighly relaxed and has ascended towards the umbilicus, will give resonance again.

These observations, he thinks, indicate that air is an important factor, not only during parturition in transmitting the muscular contractions with expansive force against the fœtus, and thus producing delivery, but that it is also a prime factor in causing the ascent of the uterus during pregnancy and for a brief period after delivery, and possibly in supporting it at all times. They also indicate that rupture of the perineum and rupture of the uterus, are not always due to direct muscular action, but are in great part the result of the sudden expansive force of the intra-uterine air when subjected to intense compression by the abdominal muscles, and confronted by a rigid perineum, or a firmly impacted head.

They also indicate, he thinks, that many hitherto unexplainable cases of still-births have been due to the subjection of the chil-

dren for too long a time to intense intra-uterine air pressure, and that they died as inevitably as adults will die who remain too long in compressed air, as in a caisson.

The facilitation of delivery, he believes, is therefore admirable in many cases, not alone for relieving the mother from pain and danger, but for the purpose of removing the child from a possible cause of serious disease, if not death, and delivering it healthy and vigorous, as well as alive.

GYNÆCOLOGY.

ELECTRICITY IN THE TREATMENT OF UTERINE FIBROIDS.

Chevrier (*Nouvelles Arch. d'Obstét. et de Gynéc.* October and November, 1891), after careful clinical research, has arrived at the following conclusions: The results following electricity in the treatment of uterine fibromyomata are inconstant and unsatisfactory; most of the patients, sooner or later, are obliged to undergo surgical operations for which they are not so well prepared as before the electric treatment. As a solvent of exudations, galvanism is absolutely ineffective. As an analgesic, it is very untrustworthy. As a hæmostatic, it gives fair results. Removal of the appendages does not give worse statistics than galvanism, and its results are better as to the rapidity of relief and duration of effects. In pedunculated tumors the continuous current is quite useless. Castration gives satisfactory results, but in these cases removal of the tumor is indicated, especially when pain and symptoms of pelvic pressure are well marked.—*Brit. Med. Jour.*

INCOMPLETE REMOVAL OF DISEASED OVARIES.

At a meeting of the Société de Chrirugie, Routier (*Ann. de Gynéc. et d' Obstét.*, November, 1891) said he objected on principle to Pozzi's method of conservative operations on the sclero-cystic ovaries. Conservative surgery, he holds, is irrational in cases of the kind, in oöphoro-salpingitis, and in cases of sclerosed ovaries where the tube is healthy. Pathological anatomy shows that in ovaries under these conditions all the ova tend to cystic degeneration. The stump left with part of the ovary on it is liable to to a return of disease, with the attendant sufferings for which the patient originally desired operation. At the same time, the patient is just as surely sentenced to sterility as though the whole of the appendages had been removed. The failures in many cases included in long series of operations for the entire removal of the appendages are in no small part due to the imperfect removal of the ovary; thus a piece of the ovarian tissue may be left on the distal side of the stump. It is equally unsatisfactory when the Fallopian tube is purposely left behind. In one instance Routier failed to cure a case of hæmorrhagic metritis with the curette. He removed the ovaries and left a healthy tube, all the trouble returned—a fact favoring Tait's theory on menstruation. At length Routier had to remove the uterus by the vagina. In two other cases, in women with metritis and retroflexion, where the curette had cured the flooding but not the pain, he fixed the uterus in position by hysteropexy, but left unremoved the almost healthy appendages on one side. A few months later he was compelled to perform vaginal hysterectomy. Pozzi replied that it was not by any means certain that a woman must necessarily remain sterile after conservative operations on the ovary of the kind which he recommended.—*Brit. Med. Jour.*

PÆDIATRICS.

NAPHTHALIN IN WHOOPING-COUGH.

Many remedies have been vaunted for the cure of whooping-cough, but with little satisfactory results in the majority of cases. A proposal to add napthalin to the long list of so-called cures has arisen in the following manner: Dr. Chavernac, of Aix, during a recent epidemic, seems to have allowed his son, who was 18 years of age, while suffering from the affection, to continue to attend school. One day the lecturer on science had burned some substance which gave off very strong fumes, which, though disliked by many of the boys, had the effect on him of immediately stopping a violent fit of coughing. As soon as the windows were opened, and the fumes passed away, the cough recommenced as violently as ever. His father, having discovered that the fuming substance was merely naphthalin, had about an ounce of it burned in the lad's bedroom, with the result that he breathed a great deal more easily, and only had one slight attack during the night. The next day, being at school, he had several attacks, but they were somewhat less severe than they had previously been. The next night the drug was again burnt in the bedroom, and this second dose entirely cured both the cough and the expectoration, which latter had been rather profuse. The father was then attacked, and in three days cured himself by the same treatment.

subsequently tried it with several of his patients with marked success, and with the concurrence of a friend, who was medical officer to a convent school where the epidemic was raging, he tried it on thirty affected children. After the naphthalin had been burnt two successive nights in their dormitory, they were all cured. Two of the nuns, however, found the fumes very irritating, and, on these ladies being examined, it was discovered that they were both suffering—quite unknown to themselves—from incipient phthisis. From this, and from further observations, Dr. Chavernac has come to the conclusion that naphthalin is contra-indicated in phthisical persons, and that it may sometimes serve to reveal the existence of totally unsuspected tubercle. It may be remarked that the so-called albocarbon used freqently for enhancing the lighting power of gas, is somewhat crude naphthalin. The method employed by Dr. Chavernac is to place about three-quarters of an ounce in a metal dish surrounded by hot coals. It soon melts, and before long fills the room with white fumes, which he considers by no means unpleasant. The old custom of taking children to gas works for whooping-cough has generally thought to depend on the curative effect of gas tar; but from the above it would appear that the naphthalin which crystalizes out in the retorts and pipes is, perhaps, really to be more credited with efficacy than the tar.—*Lancet.*

TREATMENT OF CONVULSIONS IN CHILDREN.

In the treatment of convulsions Decroizilles (*L'Union Médicale*) recommends that the child be taken at once to a well-ventilated room, and that the clothing be removed in order to discover any points of irritation to the skin. A lukewarm bath, either with or without the addition of mustard, should next be given. The head should be kept cool by means of cold applications, or even by a stream of cold water kept constantly running upon the fontanelles. In Germany and Switzerland convulsions produced by hyperpyrexia are treated by plunging the child at once into a cold bath. As the irritation may be due to the digestive tract the fauces should be titillated or an emetic administered. If the stomach be tense it is advisable to use a purgative, 10 to 20 cgrm. (1½ to 3 grs.) of calomel, or 5 to 15 grammes (lxxx to ℥ss) of castor oil, or 8 to 16 grammes (f℥ij to f℥ss) of manna suspended in milk. If the child has given passage to a worm an immediate vermifuge should be administered. If there be cerebral hyperæmia, the application of several leeches behind the ears or to the thighs or the tibio-tarsal region is recommended. In vigorous children venesection, either from the arm or from the saphenous vein, can at times be employed. Warm cataplasms, prepared with mustard, can be applied to the lower limbs. The carotid arteries, following the precautions laid down by Trousseau, may be compressed with care. Inhalations of chloroform are capable of giving good results, but they are only transient, and their repetition is not without danger. When the duration of the convulsion is prolonged, 5 to 40 cgrms. (¼ to 6 grs.) of oxide of zinc, with equal parts of henbane, may be given. The bromides, associated with chloral, give especially good results. The dose of the bromide should be ½ to 1 gramme (7½ to 15 grs.) in very young children, 2 to 4 grammes (℥ss to ℥i) in older children, and 4 to 6 grammes (℥i to ℥iss) in those approaching convalescence. Chloral should be administered in 5 cgrms. (gr. ¾) in the newborn baby, 15 to 20 cgrms. (2½ to 3 grs.) in the nursing baby, 20 to 30 cgrms. (3 to 4½ grs.) below two years, and 40 to 80 cgrms. (6 to 12 grs.) in children from 7 to 13. The administration of chloral should be promptly suspended and renewed if there be any necessity. After the attack the child should have complete rest; and tonics, with the prolonged use of the bromides, cold affusions to the head, with baths and strict hygienic alimentation, should be ordered. It is wise, from time to time, to advise that the child be given small doses of calomel, valerian and oxide of zinc.

INHALATIONS OF OZONE IN THE TREATMENT OF WHOOPING-COUGH.

Dr. Hellet sets forth, in the *Revue International d'Electrotherapie*, the results which he obtained in the treatment of whooping-cough with ozone, as follows:

Ozone produced by electricity has never given rise to unpleasant effects in our hands. We have ascertained that ozone is a powerful reconstructive, an incomparable modifier of the blood, since it is necessary to breathe strongly ozonized air for only a quarter of an hour in order to increase, in certain cases, the proportion of oxyhœmoglobin one or two per cent. when it is already 14 per cent.

Though opinions may have differed concerning the beneficial therapeutic effects of ozone, there has not been any dispute about its disinfecting and antimiasmatic actions.

Numerous experiments have shown that it acts powerfully upon germs and ferments, that it arrests their development and even destroys them. In view of this fact, and remembering also, that ozone is a powerful reconstructive, I do not hesitate to prescribe inhalations of ozone to little children suffering from whooping-cough, thinking that this disease, which is of microbic origin, would be favorably modified.

Up to the present time only four cases have been treated: a girl of six years, another of five, another of two, and a boy of fifteen months. These children inhaled ozone every day for fifteen minutes. In every case the number of paroxysms was carefully noted.

In all of these cases the course of the disease was favorably modified. The number of paroxysms diminished, and their general condition rapidly improved, which is a very important consideration; they became cheerful, and the appetite was restored.

The parents always noted that the children became more playful after the inhalations of ozone; their paroxysms became less violent and less exhausting.

The duration of the disease seems to have been shortened.—*La Medecine Moderne.*

SOME REMARKS ON THE TREATMENT OF DIPHTHERIA.

Dr. Szuman, of Thorn, remarks that all internal remedies applied against diphtheria may divided into three categories: (1) Remedies dissolving fibrinous membranes; (2) antiseptics, and (3) specifics for diphtheria. In the light of the progress of science, which has proven that the membranes are not the real localization of the disease, but the deeper-lying tissue, and very often the whole organism, the value of the remedies of the first category become very doubtful. A somewhat greater value is attributed to antiseptic drugs, their value being seen principally in the preventive treatment. Of the drugs in the third category, it can only be said that none deserves the name of a specific. Later, acids began to be employed; their action, however, is not as yet sufficiently known.

The method that Dr. Szuman employed is founded upon the application of three acids, namely, upon the internal administration of acetic acid, inhalations of carbolic acid, and gargling the throat with a solution of boric acid. The result of this treatment, in comparison with those employed up to the present time, is satisfactory, because out of thirty cases treated by this method all recovered. Though, indeed, in two cases the diphtheritic process extended into the larynx, nevertheless recovery ensued—in the first after inhalations of acetate of aluminum, together with internal treatment, and in the second after tracheotomy.

Reflecting upon the mode of action of acids on the human organism, the author came to the conclusion that we may, perhaps, have to do here with local action, the observations showing that acetic acid can pass through the unbroken skin; and Brun's experiments proving its antiseptic properties, even when much diluted, confirms this opinion. He does not exclude the possibility that the acid reaction in the oral cavity arrests the diphtheritic process. The employment of alkalies, viz., lime water, acting on the development of putrefaction, as well as all mechanical methods, he regards as dangerous, and believes that the advantages of his method consist in constantly keeping the throat and oral cavity in a state of disinfection and acidity, which arrest the putrefaction of membranes.

CITY DUST.

Dust, like the poor, we have always with us, nor has Hygeia with her newest brooms yet succeeded in banishing it. Yet there is abundant evidence to show that a dusty street contains more lurking potentialities of mischief than a jungle peopled with the hungriest wild beasts. To the researches of Miquel and others can now be added the results of an elaborate investigation by Dr. Luigi Manfredi of the composition of the dust of the streets of Naples. The number of microbes of all kinds found in it amounted on the average to 761,521,000 per gramme. Remarkable differences in the proportion of micro-organisms were, however, observed in the dust from different quarters of the city. Thus, in the streets least exposed to contamination, that is to say, where there was the least traffic and where the hygienic conditions were most satisfactory, the average number of microbes in the dust was only 10,000,000 per gramme. On the other hand, in the busiest thoroughfares, the average rose to 1,000,000,000, and in some of the dirtiest streets to the enormous figure of 5,000,000,000 per gramme. In this "endless ocean" of infinitesimal life, there was a large number of pathogenic organisms, and the unhealthiness of the street or quarter was directly proportional to the number of microbes in the dust. Dr. Manfredi carefully tested the infective power of the dust, and obtained positive results in 73 per cent. of his experiments. Of forty-two

cases in which he communicated disease to guinea-pigs by inoculating them with Neapolitan dust, he found the microbe of pus in eight, the bacillus of malignant œdema in four, the bacillus of tetanus in two, the bacillus of tuberculosis in three, not to mention several other microscopic *ferœ naturæ* possessing the power of inducing fatal septicæmia in the unfortunate guinea-pigs on which they were tried. The moral pointed by these discouraging facts is that our Ædiles should take the Dutch housewife for their example, and wage relentless war against dust and dirt of every kind.—*Brit. Med. Jour.*

SHORTENING OF BEIDERT'S METHOD FOR FINDING TUBERCULAR BACILLI IN THE SPUTUM.

Dr. Kronig has applied the centrifuge to the examination of the sputum, with the result that a considerable number of tubercular bacilli were found in a case where the ordinary method had failed to reveal them. The sputum was diluted with a solution of caustic soda, and on the application of centrifugal force for five minutes, a somewhat compact sediment was separated, which gave the above result on examination. By Beidert's method the sputum so diluted has to stand for two or three days to allow of the precipitation of the bacilli. Professor Litten has explained the application of Stenbeck's centrifuge to clinical medicine.—*Boston Med. Sur. Jour.*

FISSURES OF THE ANUS IN CHILDREN.

Dr. Bruun (*Hospitals-Tidende*, R. 3, Bd. 8, S. 1089) finds the use of lime water as an addition to milk a frequent cause of constipation and consequent fissures of the anus in children. Any cause which produces diarrhœa, with following constipation, will cause it. Constipation, proctitis, and severe pains on defecation are the results of a fissure. Hernia and masturbation are possible consequences. The condition may be long-lasting, although it is easily discovered when attention is called to it. He treats it by regulating the diet, cleanliness, irrigation of the rectum, and dilatation of the sphincter ani, which is easily done.

EARACHE.

℞ Chloral. camphorat. ..... parts 5.
Ol. amygdal. dulc. ..... " 10.
Glycerin. ..... " 30.
M. Sig. Apply on cotton, and introduce into the ear.

—*The American Doctor, April, 1891.*

HYGIENE.

WHAT IS EFFICIENT VACCINATION?

That there is a difference of opinion, both in and out of the profession, as to what constitutes efficient vaccination is evident from the frequency with which the question is put by mothers, "In how many places do you vaccinate?" My invariable reply is, "In four places." This often provokes an earnest appeal only to vaccinate in two, and sometimes even in one place, and this request is followed up by the remark, "Dr. So-and-So only puts two on," and I have heard medical gentlemen credited with vaccinating only in one place, and with avowing that one was enough.

After a little reasoning, I generally gain my point, and four vesicles is the result. If the mother continues obstinate, I give in to three, but in a measure I still gain my point by trying for, and generally securing three extra large vesicles on the eighth day.

Below three I never go, and if the parents —for the father is sometimes appealed to— still hold out, then I decline to vaccinate the child, and retire from the case.

There ought not to be such a difference of opinion amongst medical men as to how many vesicles give evidence of protection from small-pox; and if we were unanimous, mothers would soon be willing and even wishful for their children to be efficiently vaccinated. Public vaccinators are enjoined, in the instructions they receive from the Local Government Board, to secure, if possible, four good vesicles on the eighth day.

A few years ago, when application was made to the Local Government for calf lymph, with the lymph came a leaflet of instructions, which advised, amongst other things, that the "lymph be rubbed into each of four or five places" in the child's arm. These instructions are now discontinued.

During the epidemic of small-pox in Leeds in 1870, my colleague, Dr. Fredk. Hall, and I, having charge of the small-pox hospital, tabulated the evidences of vaccination of each case on admission. We found that those cases who showed four vaccination cicatrices on the arm were few in number, and had the disease in a mild form. Those with only three or two marks on the arm had the disease more severely, and were in the hospital a longer period, and of the unvaccinated cases the majority died. This was conclusive evidence that at least four vesicles should, if possible, be obtained, and thus secure what is generally considered efficient vaccination.

Imperfectly vaccinated cases, when they fall victims to the small-pox, are just those who, being registered as successfully vaccinated, throw discredit on the system, and generally help to keep up the disease in an endemic form.

As a remedy I would venture to make two suggestions: (1) That a short paragraph be inserted in the ordinary vaccination certificate, informing the parents that the child should be vaccinated in at least four places, and that this, and this only, constitutes efficient vaccination. (2) That a small space be left, say just above the date and signature on the third page of the certificate, in which space the vaccinator be required to note in figures the number of places in which the lymph has been inserted, and the number which have "taken" on the eighth day, and that these figures be duly entered by the registrar in his book. Thus, in after years, when small-pox breaks out, the names of the victims can be turned to in the register, and the number of vesicles noted, which had originally been obtained and certified as successful vaccination.

In this way valuable evidence will be obtained as to what constitutes efficient vaccination, and the more strictly carrying out the requirements of the law will be facilitated. I am, etc.—HENRY C. LIBBEY, in *British Medical Journal.*

BENZINE AS A PREVENTIVE OF TRICHINOSIS.

Dr. Putter, jun., of Stralsund, reports in the *Deutsche Medicinische Wochenschrift* on the favorable effect of benzine after the consumption of pork full of trichinæ. A pig had just been killed, and some hours after twenty-seven people had eaten of the meat the inspector informed the owner that the animal had been suffering from trichinosis. All the twenty-seven people, adults and children from fourteen to seventeen years, had boiled pork for dinner; the wife of the owner and four other women, in making sausages, had repeatedly tasted the raw material. Dr. Putter was informed of the mishap the same evening, and prescribed 270 gelatine capsules, each to contain seven and a half grains of benzine; each person to take five capsules the next morning before breakfast, and an hour later a large teaspoonful of pulv. rhei. and pulv. glycerrhizæ co. in equal parts—the children, of course, less in proportion. The same dose was to be repeated in the afternoon, and the purgative only the next day. The benzine was well borne by all the patients, a few only complaining of malaise aud eructations, but none of them vomited. Eight months later all the twenty-seven people were still perfectly healthy, as were the women who had tasted the raw sausages. Dr. Putter is so convinced that his treatment alone prevented the people from being attacked by trichinosis that he recommends it warmly in all similar cases.—*Lancet.*

MEDICAL CHEMISTRY.

ACETANILIDE FOR THE PRESERVATION OF HYPODERMIC SOLUTIONS.

Thomas J. Keenan writes in the *Amer. Drug.* of the various chemical bodies known to exert an inhibitory action on the development of the fermentative and fungoid growths which occur in simple solutions of the alkaloids prepared for hypodermic use, and in solutions of organic chemicals generally, acetanilide, from the consideration of its non-irritating properties and its efficiency in weak solution, in his opinion easily takes first place.

Glycerin, alcohol, salicylic acid, boric acid, chloroform, and a host of others, chiefly derivatives of the aromatic hydrocarbon series, have been at different times strongly recommended for their individual properties, and used with favorable results; but experience has demonstrated that all have their objectionable features.

Glycerine is seldom used on account of its slightly irritating properties and the increase of density which follow its addition.

Alcohol is irritating and liable to cause precipitation.

The chief objection to the use of salicylic acid, apart from its readiness to react with other chemicals, and one which may be overcome at the discretion of the pharmacist, is the strength in which it is directed to be used.

This is stated by the compilers of the Addendum to the British Pharmacopœia, and other official bodies, to be a saturated solution representing about one grain in one fluid ounce, thus affording a concentration considerably in excess of the amount actually required; solutions prepared with it in the proportion of one-eighth grain in one fluid-ounce keeping equally as well as the stronger ones, besides being less liable to cause the precipitation which sometimes takes place in concentrated solutions of morphine or similar bodies of long standing.

Boric acid is only suitable for a limited application, being, however, especially well

fitted for the preservation of cocaine solution when the latter is intended for local application.

Chloroform, in the form of Aqua chloroformi (N. F.), is generally considered the most useful of any of the preservatives yet proposed, and is, perhaps, more widely employed than any other in the list here given. It is non-irritating and convenient of use, besides being free from the danger of reacting with the substance it may be added to. It is, however, less reliable, in his opinion, from its evanescent nature, than either salicylic acid or acetanilide, particularly when evaporation is assisted by the frequent removal of the stopper in extensive dispensing.

IMPROVED PROCESS FOR CONDENSED MILK.

A Russian chemist uses a centrifugal machine for separating the cream and skimmed milk. The casein is then precipitated from the latter, and condensed at a low temperature in a vacuum pan having a sight of colored glass which admits yellow or red light, it having been found that the more refrangible rays have a deleterious action on the miscibility with water of the condensed product. The acidity of the milk is not allowed to exceed a limit of 5.5 (SOXHLET-HENKEL), and to this end a definite quantity of caustic or carbonated alkalis or alkaline earths are added to the milk. The condensed milk is mixed with the cream and milk sugar.

DETECTION OF FATS MIXED WITH VASELINE.

Caustic alkalies are without action on the normal constituents of vaseline in the process to be described, whilst they combine in definite proportions with the fats to form soaps. Experiment has determined that 10 gm. of these fatty compounds absorb 1.635 gm. of potassium oxide, K_2O, and the calculations are based on this. A standard alkali solution is prepared by dissolving about 20 gm of potash in 100 cc, of 90 per cent. alcohol. This is standardized by means of standard sulphuric acid. A neutral alcohol is prepared by dissolving one cc. of phenolphthalein in 500 cc. of 90 per cent. alcohol, then alkali is stirred in drop by drop until a very slight rose tint is produced. Ten gm. of the vaseline to be tested are placed in a 200 cc. porcelain basin, ten cc. of standard alkali added, the basin being kept on a water bath during the whole process; 50 cc. of neutral alcohol are now added, the solution heated nearly to boiling, and the mixture stirred for eight minutes, when the saponification will be complete, and normal sulphuric acid added drop by drop until *all color* has disappeared. This point is very important. If too long a time has been taken it may be necessry to add a fresh portion of neutral alcohol to replace the loss by evaporation. The amount of sulphuric acid run in, subtracted from that required to saturate ten cc. of alkali solution. multiplied by 0.0047 gives the quantity of potash absorbed by the fats in ten gm. of vaseline, and this number divided by 0.0163 gives the percentage of fats in the vaseline.—MR. VIZERN and C. NICOLAS in *Journ. de Pharm.*, after *J. Chem. Soc.*

REMEDY FOR BUMPING.

E. Pieszezek, in the *Chemische Zietung*, gives a description of a simple device made use of by him for the prevention of the phenomenon known as "bumping" in boiling liquids. It consists in placing a glass tube about 5 to 8 ccm, in length, and 5 to 10 minims in width (the exact dimensions depending upon the bulk of the liquid to be boiled), and closed at the upper end, resting upon the side of the flask or other vessel to be heated, so that it stands nearly vertical, with its open, sharp-edged end pointing downwards. Boiling goes on quietly when once started, the bubbles making their appearance at the lower end of the tube. On cooling, the liquid rises in the tube, which must therefore be raised and allowed to again become full of air before beginning the boiling again. The device is said to be efficient even for liquids containing heavy precipitates such as barium sulphate and lead sulphate, and is also recommended for the Reichart-Vollny process.

THE ESTIMATION OF MILK SUGAR IN MILK.

The main difficulty in the determination, as ordinarily carried out, is in obtaining a filtrate sufficiently clear for titration. As prepared by the usual methods, it is opalescent or even quite turbid from the fat which passes through the filter.

It has been found, by making use of the well-known property of aluminium hydrate, to drag down precipitates, and by following the recommendations of Radliscu (*Mittheil. d. pharm. Inst.*, Erlangen, iii., 93) regarding the amound of acid, intensity and duration of heating, all of which are of great importance in the rapidity and completeness of the curdling, that a clear filtrate is readily obtained.

The method is as follows: 25 cc. of the milk are mixed with 15 cc. of "milk of alumina," and 0.5 cc. of 25 per cent. acetic acid added, the mixture stirred and heated five to seven minutes in a water bath the temperature of which is 85° C.; 100 cc. of water are now added, and the mixture is heated in boiling water for ten minutes, with frequent stirring. It is thoroughly cooled under the tap, allowed to settle, and decanted through a plaited filter (Schleicher & Schüll, No. 597) into the 500 cc. graduated flask, being careful to bring as little precipitate upon the filter as possible. The operations of boiling and filtering are repeated three times, and the filtrates made up to 500 cc. It is then ready for titration by Fehling's solution in the usual way.

The "milk of alumina" is prepared by precipitating at the boiling temperature 125 gm. ammonia alum with ammonium hydrate, washing the precipitate by decantation, and making it up to 1 L.

The method has been in use by the students at the Massachusetts Institute of Technology for a year, and given very satisfactory results.—AUG. H. GILL, in *Journ. Anal. and App. Chem.*

NEWS AND MISCELLANY.

A Chinese translation by Dr. Hunter of the British Pharmacopœia has been recently published.

LYSOL has been found to deodorize a case of moist gangrene, in which a solution of permanganate of potash, and creolin had failed.

A successful case of bone-grafting is reported from Allahabad, a solution of continuity in the anterior layer of the frontal sinus having been induced to take on osseous repair by sprinkling the surface with "small fragments" of the hip-bone of a newly killed dog.—*Medical Press.*

MATTHEWS DUNCAN MEMORIAL.

At the last meeting of the Aberdeen University Court a letter was submitted from Professors Alexr. Ogston and R. W. Reid, formally handing over to the Court a bust of the late Dr. Matthews Duncan, to be placed in the Medical School, and a check for £140, to be invested to provide a gold medal to be known as the "Matthews Duncan Gold Medal in Obstetrics.—*Brit. Med. Jour.*

THERE'S THE RUB.

To vaccinate or not? That is the question,
Whether 'tis better for man to suffer
The painful pangs and lasting marks of small-pox,
Or to bare arms before the surgeon's lancet,
And, by being vaccinated, end them? Yes,
To feel the tiny point, and say we end
The chance of many a thousand scars,
That flesh is heir to, 'tis a communication
Devoutly to be wished. Ah! soft you now,
The vaccination! Sir, upon your rounds,
Be my poor arms remembered.

—*Puck.*

RUBBER FOOT FEVER.

If a man has a corn, says the *India Rubber World*, it can be removed, but if he is suffering from rubber foot fever, no chiropodist can help him, and the only thing to prescribe is liberal bathing of the feet and removal of the cause. Rubbers should only be worn to keep wet out, and they should be removed the moment the wearer gets indoors. Failure to note this gives a man wet feet in a far worse sense than if he waded through mud ankle deep. It was the trouble resulting from forcing the perspiration to soak the stockings and keep the feet perpetually damp that drove rubber-soled boots out of the market. Even loose rubbers are a source of danger, and the cause of more serious colds than they avert.

THE EFFECT OF FOG ON ACTINIC LIGHT.

A committee of the Field Naturalists Society have ascertained the composition and character of the air in four stations in Manchester and two in Salford. The Committee find that a very marked increase has taken place, both in sulphurous acid and organic matter, especially during the past month. Speaking generally, the district of Ancoats and the centre of the city show the greatest amount of pollution. The amount of light (chiefly actinic) was measured for each day; the difference between town and country became more and more pronounced as the winter months were reached. Fog cut off the actinic light almost completely, the record in the country (free from fog) being for the same day ten to twenty times that in Manchester. The general falling off of light as the season advances was most striking, the amount in October, taking similar days, being little more than one-third that measured for August.—*Brit. Med. Jour.*